





OUR PORTRAITS.

WE recommence this month the publication of portraits of gentlemen with whom we believe our readers will be glad to make personal acquaintance. Our artist has succeeded admirably in his sketch of the present president of the Pharmaceutical Society. Next month we hope to give a portrait of Charles Maw, Esq., as the leading representative of the chemist and druggist commercial world.

EDUCATIONAL NUMBER OF THE "CHEMIST AND DRUGGIST."

PART of our next issue (September 15) will be devoted as usual to the publication of important information respecting the commencement of the sessions in medical, pharmaceutical, and chemical schools. We shall be glad to receive particulars from the various schools and colleges as early as possible. We hope next month to add to the value of our information by including in it some details as to chemical education in Germany, a subject respecting which accurate particulars are much required in certain quarters. Advertisements of scientific works and apparatus and all educational appliances will be suitably placed in this number.

CHEMISTS' ASSOCIATIONS.

IN another article we give abundant particulars of the meeting of the British Pharmaceutical Conference at Bradford on September 16. This is the meeting that most concerns our readers. But as some of them will probably be travelling during the next few weeks, we may mention that the general meeting of the "Grassen Deutschen Apotheker Verein" will take place at Cologne on September 4. This represents the chemists not only of Prussia, but also of Saxony and Bavaria. The general meeting of the Allgemeinen Oesterreichischen Apotheker Verein will be held at Vienna on September 15 and 16. Simultaneous with our own and the Vienna meeting will be held the twenty-first annual meeting of the American Pharmaceutical Association, which will occur this year at Richmond, on the 16th prox. At that meeting there will be an exhibition of goods in connection with pharmacy. Anything sent for exhibition must reach Richmond before the 15th and must be delivered free of all charge at the Virginia Opera House, notice being given earlier to the Secretary of the space required.

PHARMACEUTICAL CURIOSITIES.

OUR Berlin correspondent sends us a few specimens of extraordinary pharmacy, culled from the first edition of the Prussian Pharmacopœia, "Dispensatorium Borussico Brandenburgicum," 1731. This is in Latin. The first helects is "Spiritus Cerebri Humani," p. 206—(Spirit of human Brain).

"The brain of a young man, well built and perfectly healthy, but who has been put to death by some violent means, must be crushed with all vasculars and the spinal marrow in a stone mortar, afterwards mixed in a glass mortar or in a large phial, with 'Kaiser Karls Hauptwasser'

(somewhat similar to our Eau de Cologne) and spirit of wine; this mixture is to be distilled after having stood by for one or better for several years. The dose of this elegant remedy was fixed at a tablespoonful."

Another idea from those good old times was to produce a "Water of All Flowers" (Aqua Florum Omnium). The process adopted is remarkable for its simplicity and logical accuracy.

"Send a cow into a meadow full of flowers; when she has eaten all the flowers gather the dung, distil it, and you have water of all flowers."

THE CHOLERA.

THE Vienna doctors and the authorities generally persist in asserting that the cholera which has so unfortunately visited their city is not of an epidemic character. In the middle week of July, however, there were a hundred deaths from this disease, which was a sufficiently alarming number with or without the adjective epidemic. It must be remarked, however, that the heat was intense; while the perpetual consumption of fruits, ices, coffee, with beer and cigars unlimited, makes it a real wonder that the cases are not numbered by thousands. The inhalation of ozone has been found about the most successful treatment. It is produced by adding very slowly sulphuric acid (three parts) to permanganate of potassa (two parts).

LE DOCTEUR NOIR.

THE death of this singular character has lately been reported in the papers. He came to England from Trinidad, bearing with him high testimonials, one of which was from the Governor of the island. He professed to cure cancer, especially such cases as had been pronounced hopeless. He was a creole, dark as jet, with woolly hair; hence his soubriquet. In person he was handsome; dressed with faultless taste and kept a brougham, being always attended by a servant in livery. This excited the anger of our American visitors, who were astonished to see a black man with a white domestic. He commenced London practice in a street running out of the Strand, and soon attracted considerable patronage and attention. His patients were almost exclusively derived from the upper classes, his three chief remedies being an astringent ointment made with powdered sanguinaria, decoction of sarsaparilla made extemporaneously from the root, and steel wine prepared by digesting iron filings in Malaga wine. After due maceration a red hot bar of iron was cooled in the solution. Stimulated by his success he went to Paris, where he set up in an extravagant stylo in the Rue de Rivoli. Unfortunately for himself, he came in contact with Velpéau, who demolished his pretensions. He speedily lost his reputation; he became involved in legal and pecuniary difficulties, and finally died in absolute destitution.

THE UNIVERSAL CODEX.

IN this age of all things international, attempts have been made to establish pharmacy on an universal basis. It has been thought by some, and as strongly denied by others, that

by general arrangement and consent there might exist a code of formulæ common to, and adopted by, the world. The broad question need not be discussed here, believing as we do that while such collected formulæ would be invaluable as a work of reference, there are reasons, national, physical and climatic, that would forbid either their widespread introduction contemplated or their application. Willingly, however, we bring before the notice of our readers a circular bearing on the subject, which has been forwarded by M. De Cristoforis and L. Zambelletti, both of Milan. Copies of it were requested to be distributed amongst English pharmacists, and it is here reprinted from the original without alteration.

CIRCULAR.

(Italy) Milan, February 1873.

The sciences inductive of the physical and moral laws, are now a days so much advanced on the vast road traced by the work of genius, that none of them can live in the narrow confines of a national autonomy whatever, because, every one, who can be looked upon as a factor of civility, if he refuses to follow the general spirit of sympathy and cohesion which leads every modern progress to cement, with the political and economical life of the nations also that of the sciences, which belong to them, he will soon become mean and low and be plunged into the empiricism and sluggishness of habits and prejudices.

The speculative sciences proceed withal the community of languages and facility of conveyances, as well as with the unquiet evolutions of the worldly riches; they are, for so saying, translated into the vulgar language, they dominate everywhere and with the continual union of the doctrines and interests, the true axis of the economical and social doctrines, are generated by the modification into the system of money and measures; and by the great circulation of Wealth, as well as of thought, in the enormous power of the association of capitals and treaties of the great industries as, by way of exemple, the rail roads, steamboats, telegraphs, while every nation is familiarised with the languages one of the other, especially of those which seem to advance the most rapidly and be destined to join the highest progress.

The sciences destined to fight against the wasting of physical life, always more and more ruined by the burning fever of activity of the moral one, are not surely the last in following the universal progress; and, with the alliance of the various nations, they try to destroy the absurd contrast of the different systems of one or the other theory, cooperating, for the best welfare of humanity, by the means of the alliance of all the principles and uniformity of studies.

The pharmaceutical science, which is the necessary beacon and guide of therapeutics, and which now a days presents the greatest and most grave disparity among the codes of the various nations and countries, ought to be lead on the same way, as one of the most remarkable branches belonging to the salutary art.

So that, after having submitted to a scrupulous analysis the various pharmacopias, now existing in every state, and after having acquired the firm persuasion of the necessity of a supreme unity into the preparations, in order that the clinic, by medicaments prepared into the identical conditions, may have a surer hand into the art of curing and healing every disease, with the present Circular, we intend to be the promoters and actaries of such a great conception (though others have already before us, expressed such a thought), that is, the Constitution of a universal code of pharmacopiea.

But, such an end cannot be effectively nor efficaciously rejoined, if not accompanied by a reciprocal and complete study of the therapeutics of every country; that is why, by the present circular, we do invite the learned men belonging to every nation, the scientific Bodies and Colleges, upon all, the Physicians and Pharmacoplists, not only to favour us with their adherence to our project (provided they may accept it), but also to initiate among them the necessary studies for preparing the reform, we are, since some time, elaborating; in order that, the fruitful elements of their experience, may be an help to us.

As we believe that, in order to direct efficaciously such a scattered collection of intellectual and practical forces, a center of international reunion may be necessary for examining the project, in general, as well as of the modes proper to its development, we do advise with the present circular, the Academies and Colleges, both medical and pharmaceutical, as well as all the scientific Bodies, that it is our intention to present our proposal of a universal pharmacopiea before the medical congress which will assemble in the course of this year in Vienna, during the universal exhibition; sure that, the various and numerous elements of learning assembled in that sanhedrim, may sustain and enlighten our initiation, give strength to our voice and practical direction to, an argument of such a great public advantage and interest.

If by some unfortunate circumstances the Medical Congress could not take place this year, we, subscribers of the present circular intend to become henceforward, both actors and promoters of a special academical reunion of Physicians and Pharmacoplists, Chemists, and every followers of physical and natural sciences, exclusively called for the treatment and actuation of the so much desired universal pharmacopiea.

Dottor phy. DE CRISTOFORIS MALACHIA

Primary physician of the great Hospital of Milan.

LODOVIC ZAMBELETTI

Chemist farmacopolist, in Milan.

We beg from the scientific Bodies and news papers directions, to whom we send a certain number of exemplars of the present circular, to participate them to the various sisterly societies. Letters of adherence or whatever other writing, or printed pamphlet relative to the argument in question, must be addressed to doctor Malachia I. Cristoforis (Italy), Milan, 14, via Monforte.

The undersigned have the honour of announcing that their proposal for the study and actuation of an Universal Pharmacopiea, has been accepted by the Executive Committee of the Viennese Medical Conference, and will be brought into public discussion.

L. ZAMBELETTI.

M. DE CRISTOFORIS.

May 11th, 1873.

FOR THE NIGHT COMETH.

By JOSEPH INCE.

TERRIBLE events, sudden as disastrous, have brought home to us the lesson of these words. Two brilliant careers, one that of a great lawyer, the other that of a greater churchman and orator, have had their light quenched while it was yet day; warning us who tread with unequal steps and in lower walks of life that the immediate present is our own, while the future is in the hands of God. Let us not despise our seemingly humble sphere, but, accepting the path of duty which Providence has assigned, strive without ceasing to exalt labour into love, and enter upon the medicinal efforts by which we seek to gain a livelihood with that high purpose which makes all pursuits great or little noble.

Not for us is it to indulge in romantic dreams, or to eternally hankering after fame. Riches may come, a honour; and this spirit is the direct royal road by which both are gained; but we have to deal with the necessities of existence and with the establishment of a decent social standing. Our plain duty is to provide a heritage for our children, and in such a manner that our memory shall be kept in honour. Suffer us to bring before you a strain of thought born of personal experience, and let us try to bring it home, and address ourselves to living pharmacists and their wants.

There is a class of men who have the fortune to be brought up in narrow circumstances. The father has little money and the son is very early made apprentice. His home intellectual associations are narrower than his friends'; he is a good boy, and probably goes to chapel. To him his work is the height of his ambition; he is industrious, persevering, and the various stages of his career need no description. He is certain to succeed in life; to an average, respected in his parish and lamented at his death. For such we have no word but commendation: that lot may indeed be ended which is impossible for some of us to share, still, dealing as we must with facts, and bound to the honour of journalism to speak the truth, we are ignorant that the very good within us may be a temptation to the wrong; and that, while the whole need not a physician, there are not seldom disturbing elements which set the equal tenour of our way. Education is the first;—never this sentiment expect the deluge, fearing lest the dove should never bring back the olive branch.

The splendid self-sacrifice of our fathers shaped itself in this direction; let one give his own explanation. My opening path was rough, I will smooth it for my son. I had no shadow of advantage save strong determination, the gift of perseverance, and the fear of God. My son must fight his battles, but he shall have on his armour; and while I have sixpence in the till or a muscle on my arm I will slave so that my child shall have that education which was denied to me." So the boy goes to the best possible school the father can discover. To him is open the full page of learning—the records of the past, the dead languages, and the world of art, science, and literature. Taste is formed, ambition kindled, and the stores revealed by modern languages unfolded. Society, the natural cult of cultivation, and high companionship is the second. Now comes the trial. Pharmacy is his destiny—pharmacy with its small retail trade; its minutiae of work behind the counter; its long hours; its necessary, inevitable seclusion for some years; its primary unattractive character involving admitting close attention; its new (and pardon us) its apparently lower sphere. Meanwhile the world rolls round. Many of the friends of former years succeed; he is tempted to think brilliantly and repines. Here, then, begins our mission. We come to this young man, and tell him that we sympathize with his condition and that he does not stand alone; we preach to him no stereotyped discourse about application, industry and other moral virtues, for he needs no such platitudes and could himself write a very proper essay on the subject. We say but this—the one want for him is the lion courage to accept the position, bravely, resolutely, and at once. Force himself to make the paramount object of his thought, and though now and forever the secret yearning of his heart will be towards other things, though abstract science, classical attainment, pure literature will share his love, let him be devoted thoroughly to the duties of that by which he gains a living, let his occupation become a second nature, and his heart shall be where his treasure is.

Then the chains which gall, fall off; the rose is seen better than the thorn; the listless hand is strong; the balance of a right mind restored and the transformation is complete. But if we let the golden hours go by when youth has its spring and hope its stimulus, time will have its own revenge; endeavour weakens, effort slackens, and we are left stranded on an island of illusions. The day is ours whether bright or dreary: work while it is day, for the night cometh when no man can work.

Turn the kaleidoscope and shift the scene for a moment to the student's life. It was a bright morning when you

left your native spot to come to London, bright in feeling, whatever might have been the weather. All was new—the streets and buildings—the people and their ways; there was reverence for the Abbey, and a laugh at the water squirts that disgrace the Nelson monument; there were the theatres and the Strand burlesque; Archbishop Manning and Mr. Spurgcon; the Royal Academy and the Crystal Palace, the Thames Embankment and the horse in Leicester-square. Hundreds of men and women of note, writers, preachers, actors, statesmen, Moore and Burgess minstrels, and the riders in Rotten Row. There was also Elias Bremridge who resides in Bloomsbury-square. To him you betook yourself, and a better man or secretary you will find it difficult to meet. Then you went in for regular training, and technical instruction was commenced. Do not feel annoyed that this seems lightly stated, nothing is further from our intention than mere amusement. A definite course is essential to success—a man must know enough Latin to translate prescriptions with ease and accuracy, so that on the one hand he may fulfil the directions of a physician and gain his confidence, and on the other may extend his business in the most legitimate channel. That he must be versed in practical and theoretic chemistry with its manifold trade applications, need not be mentioned. A student must not be ignorant of botany if he wishes to raise himself in general estimation, and utilize the resources Nature offers. Time is afforded in order to learn these things; all that skilled professors, classes, collections, museums, and apparatus can effect by way of aid is offered. Shall pleasure mar the opportunity? shall either vice or social amenities? shall indifference, or waning zeal, or sloth? Shall procrastination dim the fine gold of present energy, or worse still, shall drink—that vilest and most fatal of all delusions—blight the mind, the body and the soul? Forbid it, oh most Mighty and most Merciful! Lead us not into temptation. Remember the opening motto—this time can never be brought back again. Work while it is day, for the night cometh when no man can work.

Some pharmacists—we point to the Conference records, and to the annals of past years—*have* no night: they have gone on brighter and brighter to the perfect day. They have demonstrated how the highest scientific attainments can be united to successful trade. The secret lies in the absolute pleasure to be derived from original research, and we would humbly suggest that this topic should be brought prominently before us during the forthcoming September. It is a great thing when we can clear out of the barren details of any particular branch, and enter with delight and wonder into its further and deeper investigation. When the grammar of work is mastered, its poetry begins. We smile at the assiduous abstraction with which some examine minutest forms, but they have a joy with which no stranger intermeddeth. We are occasionally perplexed that the history of some root or herb should captivate and engross the attention of successive months, or that some special chemical formula should be tracked through an endless variety of combinations; but we forget that the appetite grows by what it feeds upon; and that no hunter in the chase feels more excitement than he who has once started in the pursuit of truth. By all means have a hobby—it is positive salvation. For such there is no need to moralize—their reward is with them. This passionate study, this absorbing concentration of purpose, is but the indication of the ever-present fear, that life is short while art is long. Therefore with nervous care they hoard up every fraction of their day, ever conscious that for them as well as for their humblest followers, it is written that they must work now, for the night cometh when no man can work.

THOMAS HYDE HILLS.

PRESIDENT OF THE PHARMACEUTICAL SOCIETY, 1873.

IT is not possible for every pharmacist to attain the crowning honour of our profession, but it is possible to each; and the short sketch of the career of the present President of the Pharmaceutical Society, which we here offer in company with a portrait of that gentleman, will suffice to show that there is in our ranks at least a fair field, and will also add another proof of the moral we have often striven to inculcate that the one and only path to honour is through diligent, patient, assiduous work.

Mr. Hills was born in Maidstone, in 1815, and received his early education first at the Grammar School of that town, and afterwards at Goudhurst, Kent. At the age of fifteen he was apprenticed to Mr. Thorby, of Brighton, for five years and ten months, the period intervening between then and his twenty-first birthday. Mr. Thorby himself had been an apprentice of John Bell, of Oxford-street, so the training of the young chemist was necessarily of a character somewhat suitable to what chanced to be his future life. The apprenticeship over, Mr. Hills stayed eight months with his old master (they were called "masters" in those days), and thus served altogether six and a half years in his first situation. Then he came to London, and after seeking a situation for ten days, obtained an engagement as a junior assistant with John Bell and Co. Mr. Deane, who up to that time had been superintendent, had just left, and the re-organization which ensued created the vacancy. John Garle (lately dead) and John Mackay, now of Edinburgh, were among the assistants at that time. Those who remember Mr. Mackay's cordial speech at the Edinburgh dinner of the Pharmaceutical Conference, will understand how sincere was the friendship formed between those fellow-assistants. At the time of Mr. Hills' engagement the firm of John Bell and Co. consisted of John Bell, the founder of the business, and his sons, Jacob and Frederick John. The young junior worked his way through the various stages of the house, and after about eight years faithful service, attained the position of superintendent. Seven more years elapsed, the assistant had become a friend, and at the end of that time was admitted a partner. The younger son had left the business, and shortly afterwards, in 1849, John Bell died. We published the story of this most worthy man's career in a recent number. From then until 1859, when Jacob Bell died, the business was carried on by him and Mr. Hills, who were not only partners, but close and cordial friends. Mr. Bell left his share of the business to Mr. Hills, and thus, in rather less than a quarter of a century, the latter had become the principal of one of the largest dispensing businesses in the world. Those who know anything of the work of such an establishment will testify that this end was attained entirely by patience and faithfulness, and not as this rapid sketch might almost seem to indicate, by anything like mere luck.

We have heard it said that Mr. Hills was in all probability the first associate of the Pharmaceutical Society. On April 15, 1841, Jacob Bell, William Allen, T. Morson, W. Hudson, and about fifty others had met at the Crown and Anchor in the Strand, and had sketched out the scheme of an association first for the protection of chemists from annoying legislative interference; and, secondly, for

the furtherance of pharmaceutical education and state. This association resulted in the formation of the Pharmaceutical Society. The first of these returned straight to his shop, and immediately enrolled his then chief assistant as an associate. It is fit and proper that that first associate should ultimately preside over the Society.

Mr. Hills attended some of the earliest lectures established by the Society, and went through three courses of each. The assistants at John Bell and Co.'s who cared to study used to arrange their hours of attendance on lectures in such a way that no one clashed with another, so that business was not interfered with. These three courses, therefore, must have occupied some long time, and illustrate again the patient perseverance which has so uniformly marked Mr. Hills' career. Among the attendants, too, at the evening meetings, none, perhaps, have been so regular and constant as he.

Mr. Hills was first elected to the Council in 1860, one year after the death of Mr. Bell; was Vice-President from 1863 to 1868 during Mr. Sandford's presidency, and, on the resignation of Mr. Hanbury, was chosen treasurer, an office he continued to fill until the commencement of the current pharmaceutical year, when he was elected to the President's chair. The gratitude of the members generally and the high appreciation of Mr. Hills' ability and constant attention to their interests have been evinced by the fact that for the past three years, his name has been regularly returned at the top of the election poll.

We have said sufficient to show how devotedly Mr. Hills has served the cause of pharmaceutical progress in this country. But we have not said all. Like his predecessor Mr. Bell, he has opened his purse liberally, in the hope of helping such of the younger generation of pharmacists as are willing also to help themselves. A few years ago he gave to the Society £200 in order to form a fund to provide a prize of £1 for books at every Minor Examination to be presented to the candidate passing highest, in order to aid him toward his Major. Only at the last Council meeting a further gift of £100 was announced from him, in order to provide a similar fund for Edinburgh.

A peculiarly graceful gift has been the establishment of the Bell and Hills Fund in connection with the British Pharmaceutical Conference. Mr. Hills first presented fifty guineas at the Exeter meeting, and at the Brighton meeting last year, added a further £200, partly in his own name and partly in the name of his late friend Mr. Bell. This fund, as we recently reported, is now ready for action, as an aid to original research, and in future time will most assuredly yield rich fruit.

Mr. Hills is an excellent President. Universally popular, he combines a minute acquaintance with all the details of the Society's business, with sound practical sense, just sufficient tincture of conservatism, and invariable courtesy and real kindness.

Outside of pharmacy is not our province; but as England knows the splendid collection of Sir Edwin Landseer's and other paintings bequeathed by Mr. Bell to the nation, and now hanging in the South Kensington Museum, we may just mention that Mr. Hills is equally noted for artistic tastes. He is more or less intimately connected too, with most of the scientific societies of London, but undoubtedly pharmacy has been the chief occupation of his life, and we only say the simple truth when we add that the whole trade may recognise in their present official chief a wise, worthy, and true friend.

THE CHEMIST AND DRUGGIST PORTRAIT GALLERY.



Very truly yours
P. W. Miles

THE PRESIDENT OF THE PHARMACEUTICAL SOCIETY.

ANALYSIS OF THE ...



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GERMANY.

THE PRUSSIAN MEDICINE TARIFF.

BERLIN, August 1st, 1873.

ON the first of January of every year it is usual to publish a revised edition of the medicine tariff, following the variations in the market price of drugs.

This year, however, this customary publication has not appeared, because towards the end of 1872, on the first of November, in conjunction with the new Pharmacopœia, a new tariff was promulgated which remains in force during the current year. Although the new Pharmacopœia follows generally—though unfortunately not universally—the metric system of weights and measures, yet in the computation of prices the consequent division in decimals, which might have been expected, has not been carried out.

The prices fixed for 10 grammes of any medicine are but rarely put at 10, 20, 30, 100 pfennige, or 120 pfennige, equivalent to 10 silbergroschen, so that the price of one gramme might be ascertained at a glance, but have been generally rated 1 or 2 pfennige more or less, apparently for the mere purpose of confusing the calculation. Surely it would not have been a very serious danger to fix the price for 10 grammes of phosphoric acid, for instance, at 10 pfennige instead of 12 or 1 silbergroschen; or that of essence of bitter almonds for 10 grammes at 15 pfennige in place of 16; the price of essence of peppermint for 100 grammes at 20 instead of at 18 pfennige, and that of atropia for one decigramme at 80 instead of 78 pfennige. These illustrations, extracted at random, from the first few pages, might be continued throughout the whole book, and would prove how little the decimal system as yet has penetrated into the flesh and blood of our commercial community.

It is to be hoped the time will not be distant when England also will no longer exclude the decimal system, and then of course such incongruities will be impossible. This, indeed, may be one of the results of the congress to be held in Vienna as to the advisability of an International Pharmacopœia, to which for a long time past influential physicians and apothekers have expressed their adherence, even previous to the latest proposal from Milan, which is going the round of all the pharmaceutical journals.

The tariff of drugs in Germany is compulsory, and every apotheker must strictly adhere to it. Each article has its fixed price for the year being, and this price once affirmed in the tariff must be retained to the end of that year, never mind how high or low the market prices may rise or fall. This sometimes happens awkwardly. The price of herbs, for instance, is just now double that of last year, because those who used to gather them can obtain better remuneration for their labour in other ways. During the last six months iodide of potassium was, as is well known, subject to considerable variations in price. The purchase price per pound in November was 60 schillings. Later it could be had at the rate of 20, and now for 30 schillings. Yet since the 1st of November the price for 10 grammes has been 1½ schilling, and that price will be maintained until the 1st of January, 1874, no matter what its market value may be. It so happened at the commencement of the current year that speculators laid hold of iodide of potassium, and at the same time a new method in the manufacture of aniline was introduced, which required larger quantities of iodine, and thus enhanced its price considerably. However, this new process does not seem to have proved successful, and prices have consequently receded.

The Prussian tariff not only defines the price of every article that is to be had in the apotheken, but it also states the rate to be charged for any vessel used in the dispensary,

while each flask or bottle, and even each box has a price according to size. Not less minutely are the prices regulated at which certain manipulations are to be charged, and with a closeness, painful and paltry, provision is made in cases where two operations which might be sometimes charged separately, can be performed at one time for the same mixture, and are to be charged only as one. Thus under the heading Solution, we read:

For the dissolving of one or more extracts (with the exception of fluid extracts) of sugar or gum arabic in any liquid, filtration not being necessary; for triturating electuaries and pulps, as also for triturating powders with any liquid if the powder does not or only partially dissolves in such liquid, 1 groschen.

Note 1. If in any mixture an extract is to be dissolved, and there is also a trituration, no charge is to be made for the latter operation.

Note 2. If in one mixture a solution of salts in aqua communis is to be made, and also a solution of any extract, both operations may be charged, but no charge is to be made as for aqua communis filtrata.

For dissolving of one or more salts of sugar or manna in water or other liquid, including straining or filtering of the solution, 1½ groschen.

Note 1. If the salts are enumerated, as in a crystallized and pulverized state in the tariff, the solution can only be charged according to the price of the crystallized salt.

Note 2. For a solution of salts that are to be used for making pills, ointments, and so on, no charge is to be made.

Note 3. If salts, sugar, and manna, or only two of those ingredients form one solution, the price of one operation only can be charged.

For the dissolving of phosphorus in sebacic or etherial oils, in ether or alcohol, 1 groschen. Furthermore, the prices for decoctions, for preparing of plasters, pills, ointments, powders, etc., are determined with the utmost precision, of which but a few instances shall be added here.

The preparing an emulsion is to cost 2 groschen; a plaster from 1½ to 6 groschen, according to size; pounding and forming thirty pills, 2 groschen; an ointment which requires no melting, 1 to 5 groschen; ditto with melting, 2½ to 8 groschen.

Each separate operation of weighing or counting out drops is priced 3 pfennige.

[We may mention that the Prussian currency is as follows:—12 pfennige=1 silbergroschen, 30 silbergroschen=1 thaler. A thaler (or reichsthaler, which is its full name) is worth 3s. of our money. Therefore a silbergroschen is worth not quite 1¼d. of English money.—ED. C. & D.]

AUSTRIA.

VIENNA, August 1st, 1873.

At the meeting of the "Allgemeinen Oesterreichischen Apotheker Verein," held on the 4th July, some Paris pharmacists, Messrs. Dr. Hottot, Emile Delpach, and Limousin delivered very interesting lectures on their pharmaceutical exhibits in the International Exhibition. Dr. Hottot produced a pepsin which, from its exquisite purity, attracted the especial notice of all present. Experiments made by means of this pepsin in the laboratory of the technical college, and also in that of the Allgemeinen Oesterreichischen Apotheker Verein, compared with those of other manufacturers known in Austria, proved that 10 centigrammes of it were capable of completely changing in an hour 6 grammes of fibrin into albuminose, or, we may say, to dissolve it. In like manner 6 grammes of fresh albumen were dissolved in five hours by 6 centigrammes of Dr. Hottot's pepsin. No other kinds of pepsin in the same proportions were found to give a solution. Not less interesting was the lecture of M. Limousin, on his apparatus for producing oxygen. Having tried lately in several cases of cholera the use of oxygen, and partially with success (especially with ozonised oxygen), this little apparatus, which greatly simplifies the production of oxygen, may be well recommended.

On the 15th and 16th September will take place the General Meeting of the Allgemeinen Oesterreichischen Apotheker Verein, in its own house in Vienna, Bezirk IX., Spitalgasse No. 31.

FRANCE.

VIENNA EXHIBITION.

A visit to the Exhibition Palace will show us that chemistry and pharmacy, notwithstanding their rapid progress in late years, and their beneficial effects on all other branches of industry, are but scantily represented. France and Germany alone are exceptions, both having evinced their superiority by establishing a sub-division for chemical and pharmaceutical preparations.

At the entrance to the fourth northern wing is the exhibition of products from the French colonies, especially Algeria, with many sugar, starch, and salt exhibits, the latter comprising several specimens from the artesian well at Rochefort. There are also minerals from Algeria, sulphur, zinc, iron, copper, and lead ores, cork, and kindred products.

Through the French colonial division that for perfumes is reached. Here are exhibits from the well-known French perfumers as Legrand, Rigaud, Pinaud, Violet, Delettrez, Felix, and others, who have filled their cases with delicate flasks and scented soaps in a variety of colours, and which form one of the most attractive points to all visitors. From here one enters the chemical and pharmaceutical department, where more than forty pharmacists have exhibited their preparations in a limited but very tastefully arranged space.

Among the exhibited preparations of this group are especially noticeable the alizarine preparations by Verdet and Co., and Thomas Frères of Avignon; the aniline dyes and preparations of T. Castelha, the aniline combinations of the Company "La Pheniline;" of A. Poirrier in Paris, with beautifully crystallized fuchsin; the dye-wood extracts and corallines of Guinon; the picrolites of Picard and Guinon; the dye-wood extracts of Coët; the ultramarine and other mineral dyes of the firm Coignet Père and Fils and Co., in Paris; the benzoline preparations of Dchaynin.

Adolf Roques, of Paris, has exhibited fine crystallized iodine, iodine preparations, and camphor; Pouleine and Wittmann show very fine iodine-cadmium; Chevê and Girard, sal-ammoniac, camphor, saltpetre, and sugar of lead. Really striking is the case exhibited by Charles Gamus and Co., in Paris, containing tree-like crystallized sugar of lead and verdigris. Alum, soda, barium preparations, &c., are exhibited by St. Gobain, Chany, Cirey, Kuhlmann, Henry Merle, Lefèvre, and others. Of great interest is also the collective exhibition of the French iodine manufacturers, which contains samples of all the products of Vavac. The oldest firm here represented is Courverie and Co., Cherbourg, which was founded in 1789. Worth seeing is also the digitaline of Adrian and Co., the hæmatoïd of Desnoix and Co., potash preparations of Robert, zinc-colours of Latry, the salts of quinine of Armet in Lisle, the produce of distillation of bones of Hanzeau in Rheims, the natural phosphates of Storck and Co., the adaptations of fatty refuses of Soufrie and Co., St. Denis, and the manufactures of the "Compagnie Générale des Allumettes." The "Compagnie Parisienne de l'Éclairage au Gaz" has exhibited all products obtained by dry distillation of coals, such as tar, anthracites, aniline, and products from gas liquids. In the adjacent covered courtyard we find the platinum apparatus of Desmontis and Quennesen. This apparatus competes boldly with a similar one in the English department, exhibited by Johnson, Matthey, and Co., of London.

We conclude our stroll through the French division by mentioning that the number of French exhibitors in Group III. reaches 200. To facilitate inspection and adjudging of objects, they were divided into 10 groups.

1. Acids, alkalines, salts.
2. Pharmaceutical preparations and mineral waters.
3. Sebaceous substances (stearine, sebaceous acids, glycerine, candles).
4. Products of dry distillation (petroleum, paraffine, benzoin, &c.).
5. Perfumes.
6. Inflammable substances.
7. Dyes, organic and inorganic.
8. India-rubber, albumen, glue.
9. Products of chemical industry.
10. Statistics of production.

THE VIENNA EXHIBITION.

BY OUR SPECIAL REPORTER.

THE era of exhibitions through which we are passing in the third quarter of the nineteenth century is, in the opinion of many people, nearly played out. That they have failed to accomplish the magnificent project of establishing universal peace, which was the chief feature of the original programme in 1851, is but too sadly apparent. Since that year they have alternated with frightful wars, and Alma and Inkermann, Magenta and Solferino, Sadowa and Sedan, have *en revanche* filled up the intervals of these gatherings of peace and brotherhood. They have failed in their grand moral purposes; their only vital power besides is æsthetic and commercial. The query is whether these elements of life are sufficiently strong to keep up the necessary supply of force. In other words, the one point on which the future continuance of these exhibitions depends is the question as to whether they pay those firms who maintain them. We have no evidence enough to answer that question. Any one can see that they act as gigantic advertising mediums; and the fact that during the past twenty years exhibitors have invested ever increasing sums in this form of publicity is, to some extent, a proof of success. On the other hand, we have the evidence that many great firms avoid these competitions, that numbers of those who enter them complain bitterly of the result, and perhaps too there are some indications that public interest is on the wane.

The great Weltausstellung at Vienna would furnish testimony to both sides of this question, for while every visitor must be impressed with the grand scale on which exhibited of every kind of produce have vied with each other, there is the sad fact that to the Austrian Government, which has organized this splendid attraction, the result must certainly be a loss, which will probably reach over half a million sterling.

The journey from London to Vienna is a piece of serious hard work, but to lovers of travel is extremely interesting. To enjoy it properly at least a week each way is desirable. It is possible to do it in three days, but this is only one step short of suicide; for though the German carriages are very comfortable, they are almost invariably full, or nearly so, the managers of foreign railways are very much averse to running empty carriages. Three parts of your fellow-passengers are sure to smoke; as long as they keep awake they are certain to talk, and if any of them fall asleep they are very likely to snore; and snoring in German is a particularly unpromising accompaniment to sleep. The choice of route is a difficult matter to settle. The majority of English travellers make one of the journeys through Paris from whence an almost direct line through Strasburgh and Munich leads to the Austrian capital, or a somewhat more circuitous trip gives a glimpse of Switzerland, *en route*.

Our own voyage was by Rotterdam and Hannover to Berlin, and thence to Vienna, by way of Dresden and Prague; returning *via* Salzburg, Munich, and the Rhine. Englishmen who have been accustomed to regard Austria as one of the poor relations in the European family must assuredly be astonished at seeing the profusion of wealth which has been lavished on the capital. Within the past years the ring of fortifications which surrounded the city have been destroyed, and in their place has been erected the most magnificent boulevard in Europe. The splendour of this "Ringstrasse" can hardly be exaggerated.

The exhibition is erected on the world-celebrated public park, the Prater, a park of which the beauties have been considerably overrated. The design of the building is first of an enormous dome, the largest in the world, which is the centre of the whole, and in which are grouped some of the finest trophies selected from all nations. The great main stretches nearly a quarter of a mile in each direction, eastward and westward, and these again are each traversed by a broad transept. Running parallel with the main building is the mighty machinery hall. There are also two great cultural halls, and a handsome building with an extraordinarily fine and universal collection of pictures and statues. These are the main buildings, but in the grounds there

in all over a hundred others, some of considerable size, and nearly all of great interest. A large number of these are restaurants, and an endeavour has been made to represent as far as possible the eating and drinking customs of all nations in the world. It is a significant fact that England is conspicuously absent from this competition. The British Commissioners probably judged that an English public-house or gin-palace would hardly credit our nation among the more tasteful and refined cafés which other countries can boast. We might perhaps almost claim Messrs. Dows, Clark, and Co.'s pavilions as restaurants, but if the United States should put in a counter claim, we must of course yield. This firm has five pavilions, a fine factory from which all the establishments are supplied, and a considerable number of their elegant machines in various parts of the building are in active operation. Under the brilliant sun which rests so lovingly on Vienna, these gentlemen seem to be driving a rattling trade. It would occupy too much space even to enumerate the mere names of the other buildings, but we may mention as particularly interesting the Hungarian, Tartar, and Swedish peasants' houses, Turkish and Egyptian shops and houses, the printing and publishing offices of a daily journal specially reporting the exhibition, and appearing in conjunction with the *Neue Freie Presse*, the *Times* of Austria, American and Swedish school-houses, English model workmen's dwellings, several boiler-houses, and the Alsatian farm-house. After what we have said the reader will not be astonished to learn that this enormous exhibition occupies twelve times as much space as that of London in 1862, and six times as much as that of Paris in 1867. It cost the Austrian Government, from first to last, not less than two million pounds sterling.

It must be confessed that this exhibition, with all its grandeur, fails to make that startling, sudden impression which the beauty of our fairy Crystal Palace of 1851, and its charming *coup d'œil* on entering produced on every visitor. At Vienna the nave is crowded with cases from end to end, and from no point is there one grand uninterrupted view of the whole half mile of splendour provided for. This is to be regretted, because a sudden effect of that kind is more permanent than any amount of careful examination into no matter how many wonders and beauties.

On passing through the west portal, which is one of the most popular entrances, the visitor is at once face to face with Great Britain. An excellent position has been assigned to this country, and everyone confesses that our exhibitors have most creditably maintained the national honour. In chemistry and pharmacy, our own particular interest, we are clean beaten by France, Germany, and Austria; but undoubtedly the *tout ensemble* of the British display is very effective and satisfactory. Inclusive of the machinery and agricultural halls, England occupies in all over 16,000 square metres of space, and is beaten only by Germany and Austria. On first entering, Elkington's silver, Hancock's wonderful wealth of jewellery, the richest of which is the property of the Countess Dudley, and James Green's cut glass, are the most striking *exposés*. The first transepts to right and left belong to the United States and Brazil. The Brazilian display is very effective, but the United States has not come up to its admirers' standard. Sewing machines make the most powerful display, the Singer Company being especially prominent. Next to sewing machines, the most effective exhibit in this department is a splendid six-sided marble soda-water fountain, manufactured by John Matthews, of New York. This costly construction stands some twenty feet high, and would measure about thirty feet round it. The base is of various coloured marbles, the body of white marble, all the fixings plated, and on the top of all a female figure, Liberty perhaps, or America, or possibly Mrs. Matthews. We are merely hurrying through on this occasion, so we shall leave the chemical and pharmaceutical objects displayed for another occasion. The British collection of chemical and pharmaceutical products is in the second northern transept. India, Australia, and New Zealand are well and specially represented, and a southern transept is occupied by Spain and Portugal, after passing which we enter France. Every one is charmed with the taste, and astonished at the abundance of the French display. The bronzes, the dyed silks, and wools of Lyons, the perfumery court with its luxuriant atmosphere spreading a long distance around, the beautiful and even picturesque arrangement of chemical and pharmaceutical products make the French one of the most attractive

departments of the Exhibition. Italy comes next, with a lovely collection of statuary, which is the chief impression left on the mind by that department, and then we pass through Belgium, Holland, Denmark, Norway, and Sweden, and reach the German Empire. The Germans have contributed handsomely, and their manufactures of chemicals are of surprising abundance. Then we enter the dome. We may here mention the many works of art in stearin, which are so abundant and so beautiful as to form quite one of the special features of this Exhibition. Messrs. Sargs' imposing display is in the Dome, and is perhaps the most effective of all. It consists of a magnificent carved pedestal with a graceful pillar surmounted with a bust of A. de Milly, the founder of the factory, and surrounded by six life-size figures. We have an engraving of this handsome work of art in the hands of our artist, and shall present it to our readers next month. A noble stearin temple too has been erected by the united mineral oil manufacturers of Saxony, but perhaps the most graceful and pleasing of all is the temple of victory erected by Mr. Johann Hofmann, of Graz, in Styria. This beautifully-designed object stands perhaps twenty feet high, and is supported by six fluted Corinthian columns of snowy whiteness. Inside is a floor of mottled soap, accurately representing coloured marbles, and in the centre, on a square pedestal, a beautifully-moulded life-size figure of Victory, waving a palm. There are many good displays of chemicals under this dome, but we are avoiding them for the present. Mr. Rimmel and Messrs. Piesse and Lubin have kiosks of perfumery in this part of the building. The other English perfumers who have made prominent displays are Messrs. Atkinson and the Crown Perfumery Company. The latter have a large case stocked and arranged in a most elegant style. They have been lucky enough to sell the whole parcel in one deal to one J. Ritter, distinguished as "Kaiserlich, Königlich Hof-Lieferant."

Proceeding eastward from the dome, we pass through the abundant and rich collections of Austria, which, as might be expected, fill the largest portion of space; then we pass through Hungary into Russia, and finish off with a great number of extremely interesting, and to Western eyes novel, exhibits from Greece, Turkey, Egypt, Persia, China, and Japan. Thus have we reached the end of our first day's voyage through this latest and grandest of all the exhibitions. We have merely skimmed the surface as yet, but we have endeavoured to let a notion of the whole percolate into our minds before we attempt to examine details. Hurriedly returning, by way of the machinery hall, our national pride is again gratified by noticing the large space occupied by our countrymen, and the evident interest excited by their show of machinery. At the same time, we must candidly admit that in this respect we have most formidable competitors in Germany, Belgium, Switzerland, and France. In concluding this first notice we are pleased to take the earliest opportunity of acknowledging the marked courtesy of Mr. Cunliffe Owen, the secretary of the English Commission. Mr. Owen has filled a difficult post with rare tact and skill, and much of the success achieved by Great Britain is due to his untiring exertions. The popularity of this gentleman among the exhibitors is unbounded.

QUEKETT MICROSCOPICAL CLUB.—The 8th annual general meeting was held on Friday evening, July 25, at University College, Gower-street, Dr. Braithwaite, F.L.S., F.R.M.S., President, in the chair. The report of the Committee for the past year was read, and testified to the continued prosperity of the Club, which now numbers 570 members. The President delivered the annual address, in the course of which he noticed the progress of microscopical investigation in botany and zoology during the past year. The ballot then took place for the election of officers. Dr. Braithwaite was re-elected President. Dr. Matthews, Messrs. B. T. Lowne, T. W. Burr, and C. F. White, Vice-Presidents; and Messrs. Bywater, Crisp, Hailes, Hind, Waller, and P. C. White were elected to fill the six vacancies on the Committee. Mr. J. E. Ingpen succeeded Mr. T. C. White, who retires from the office of hon. secretary (owing to increase of his professional duties) after four years of unremitting and valuable service. The proceedings terminated with the usual *conversazione*.

BRITISH CHEMICALS AT VIENNA.

THE following are the English exhibitors at the Vienna Exhibition under Group 3 (Chemical Industry):—

SCOTT'S SEWAGE COMPANY, Ealing, London.—Dried Sewage Deposit, precipitated by means of lime from ordinary sewage water, prepared for calcination; calcined sewage deposit, tender burnt; the same burnt to Portland cement; the burnt sewage cements reduced to powder; the same cements set neat.

FLEMING, A. B., and COMPANY, Leith.—Printing and Lithographic Inks, Varnishes and Oils; Black Ink for Newspapers, Books and Commercial Forms; Coloured Ink for Fancy Printing and Lithography; Lamp and Vegetable Blacks; Vegetable Machinery Oil; Printed specimens.

CALVERT, F. C., and COMPANY, Bradford, near Manchester.—Acids—Carbolic, Rozalic, Picric, Cresylic; Dyes and Colours derived from the above acids; Carbolic Soaps, Disinfecting Fluid and Powder, Sheepwash, etc.

CORNELISSEN and TALLE, 22, Great Queen-street, London.—Printing Ink and Varnishes; Colours for Chromo-Lithography and general Lithographic Materials.

DENTON and JUTSUM, 8, New Broad-street, London.—Varnishes, Colours, Gums, Oils, and Greases.

GRANGER, JOHN, Wood-street Works, Birmingham.—Concentrated Marking Inks.

BORWICK, G., and SONS, 24, Chiswell-street, London.—Knife Powder.

PICKERING, JOSEPH, Mowbray-street, Sheffield.—Plate Powder, Polishing Paste, Furniture Polish, Harness Blacking, Razor-strop Paste, and Knife Powder.

HICKISSON, M. A., 75, Southgate-road, London.—Marking Inks, and Appliances for their use.

HUTCHINSON, JOHN, and COMPANY, Widnes, Lancashire.—Chemical Products of Alkali Manufacture—Soda, Caustic Soda, Sulphur, recovered from Alkali waste and Bleaching Powder.

JOHNSON, MATTHEY, and COMPANY, Hatton-garden, London.—Platinum Refining Boilers, Sulphuric Acid Apparatus, Crucibles, Assay Apparatus, Syphons, and Condensing Coils; Measures and Weights in Iridio-Platinum for international use; Mineral Platinum, Palladium, Iridium, etc.

CLARKE, G. B., Woburn.—Sheep Dipping Composition; Wheat Protector for preserving seed wheat from Smut and Insects.

DINNEFORD and COMPANY, 172, New Bond-street, London.—Magnesia, Fluid Magnesia, Salts of Magnesia, Granules, and other Pharmaceutical Preparations.

THE NEWCASTLE CHEMICAL WORKS COMPANY (LIMITED), Newcastle-on-Tyne.—Bicarbonate of Soda, Refined and Unrefined Alkali, Bleaching Powder, Soda Crystals, Caustic Soda, and Chloride of Calcium.

SMITH, T. and H. and COMPANY, 21, Duke-street, Edinburgh, and 12, Worship-street, London.—Chemical Products and Pharmaceutical Preparations; Morphine, Codeine, Cryptopia, and all Principles of Opium; Chloroform, Cantharidine, Aloine, Alkaloids, Pure Resins, Bromide of Potash, etc.

CROY, ANDREW, 58, North Hanover-street, Glasgow.—Non-conducting Cement.

WILKIN and CLARK, 44, Finsbury-circus, London.—Bichromate of Potash, with the chrome ore from which it is made.

WATKINS, A. T., 20, Budge-row, London.—Washing Fluid, called "Pankatharon," to supersede soap and soda.

BUSH, W. J., and COMPANY, 21 and 22, Artillery-lane, Bishopsgate-street, London.—Fruit Essences, Essential Oils, Quintessences for culinary purposes, Harmless Vegetable Colours for Confectionery, Effervescent Citrate of Magnesia, and other granular preparations.

DUNCAN, FLOCKHART, and COMPANY, 52, North-bridge, Edinburgh.—Chloroform; Medicated Pessaries, Suppositories, and Bougies; White Gutta-percha for Stopping Teeth.

CARSON, W., and SONS, Belle Sauvage Yard, Ludgate-hill, London.—Paint—Anti-corrosive Paint for Iron Work, Porous Stone, Brick, and Wood; Improved Paint Pot.

ALEXANDER, RICHARD, 23, St. James's-square, Edinburgh.—Furniture Polish.

JACKSON, T. S., 199, High-street, Southwark, London.—Wood Stains, with Specimens of Stained Woods.

SPENCE, J., BERGER, and COMPANY, London, Manchester, and Glasgow.—Phosphate of Alumina; Tribasic Phosphate of Ammonia; Ammoniate Phosphate Manure, and Alum.

RUNCORN SOAP AND ALKALI COMPANY, Runcorn.—Soap, Alkali, Refined and Carbonated Soda Ash; Refined Rosin, Bleaching Powder, Soda Crystals, Sulphate of Soda.

STEPHENS, H. C., 171, Aldersgate-street, London.—Wood Staining Fluids.

UNIVERSAL PAINT COMPANY, Oldmile, Farnworth, near Widnes, Lancashire.—Paints.

COOPER, W. T., 26, Oxford-street, London.—Effervescing Lozenges.

BRITISH SEAWEED COMPANY, Whitecrook Chemical Works, Dalmuir, Glasgow.—Chemical Products from Seaweed obtained by Stanford's Patent Process; Products obtained by means of Stanford's Patent Carbon System from House Refuse and Town Sewage.

BELL, J., and COMPANY, 338, Oxford-street, London.—Pharmaceutical Preparations, consisting of Extracts, Juices, Fluid Extracts, Oils, and Granular Salts.

CANTRELL and COCHRANE, 25, Bank-street, Belfast.—Aerated Beverages.

COHNE, S., and COMPANY (per H. C. Haddon), 62, Falmouth-road, London.—Chemical Disinfecting Soap.

FIELD, J. C. and J., Upper Marsh, Lambeth, London.—Sealing Wax; Wax and Sperm Candles; Composition Candles; Ozokerit crude and refined; Ozokerit and Paraffine Candles; Wax and Stearine Tapers, and Toilet Soaps.

CLARKE, REV. JAMES LANGTON, the Common, Ealing, near London.—"Lychnophylax," an improved method of, and apparatus for, preventing candles from guttering. (Exhibited by J. C. and J. Field, sole Agents for Great Britain and Austria.)

POIS, J. A., Nye's Wharf, Old Kent Road, London.—Refined Nut, Seed, Fish, and Animal Oils, free from Acid; Cotton Seed, raw as imported from Egypt; Cleansed and Ground Nuts.

PRICE'S PATENT CANDLE COMPANY (LIMITED), Belment Works, Battersea, London.—Candles, Night Lights, Oils, Perfumed Soaps; Paraffine, Stearine, Glycerine; Liquid Oils for use on Machinery, and for oiling Wool.

YOUNG'S PARAFFINE LIGHT AND MINERAL OIL COMPANY, 69, St. George's Place, Glasgow.—Shale Mineral Oils for Burning and Lubricating; Candles, Paraffine, crude and refined; Sulphate of Ammonia; Sulphuric Acid; Paraffine Oil Lamps.

ATKINSON, J. and E., 24, Old Bond Street, London.—Perfumes, Fancy Soaps, Toilet Powders; Preparations for the Hair, Skin, and Teeth; Toilet Requisites and Perfumeries of every description; Ivory and Tortoiseshell goods.

PIESSE and LUBIN, 2, New Bond-street, London.—Ethereal Oils, Perfumery, Commercial Products of Flowers, Transferred Odours, and Fumigants; the "Odophone," or Gamut of Odours.

RIMMEL, EUGENE, 96, Strand, London.—Perfumery, Fancy Soaps, &c.

STAMP, E. B., 29, High-street, Hampstead, London.—Vynrhine Tooth-Paste; Dontrifices, various; "Véritable Vynrhine Anglais de Stamp;" Styptic Paper; Essential Salt of Celery.

ROWLAND A., and SONS, 20, Hatton-garden, London.—Macassar Oil, for the hair; Kalydor, for the complexion; Odonto Tooth Powder.

CROWN PERFUMERY COMPANY, 40, Strand, London.—Perfumes; Toilet Soap and Toilet Requisites.

BRYANT and MAY, Fairfield Works, Bow, London.—Safety Wood and Wax Matches; Match Holders, Cigar Lights, Coloured Tapers, &c.

SMITH, T. O., 11, Grass Market, Edinburgh.—Liquid Blue, for clearing and beautifying cotton and linen after washing.

BEWICKE, D., and COMPANY, Wallace Road, Hackney Road, London.—Varnishes, Pigments; Lithographic, Letterpress, and Copperplate Printing Inks; Endorsement Ink; Boiled Oils, &c.

COLMAN, J. and J., 108, Cannon Street, London.—Starch and Starch Products made from Rice; Blues.

GREEN, J., 12, Graham Terrace, Ridley Road, Kingsland, London.—Gelatine in Sheets, prepared for tracing, for artificial flowers, &c.; Wrappers for Bonbons, Confections, &c.

JONES, ORLANDO, and COMPANY, York Road, Battersea, London.—Starch made from Rice.

MANDER BROTHERS, Wolverhampton.—Varnishes, with the Gums used in their manufacture, and specimens of Varnished Work.

PARSONS, FLETCHER and COMPANY, Gravel-lane, Southwark, London.—Indian Starch.

SANDERSON A., and COMPANY, Hull.—Painters' Colours and Varnishes.

NICOLL, D., and COMPANY, 58, Paternoster-row, London.—Uninflammable Starch—Ladies' Muslin Dresses, Mosquito Net, Muslin Window Curtains, Cotton Prints, Timber, Laths, Flooring and Partitions rendered fireproof.

SISSONS BROTHERS and COMPANY, Sculcoates, Hull.—Varnishes for Railway and other Carriages and Painters, with Gums from which they are made; and Drying Oils.

WRIGHT, FREEMAN, Needham Market.—Glue for Cabinet Makers and Carpenters, known as "Crown Glue," with specimens of the Waste Hides, &c., from which it is made, and examples of its application.

BERGER, SAMUEL, and COMPANY, Bromley-by-Bow, London.—Rice Starch; Improved Patent Rice Starch in powder; Air-dried Starch; samples of the Rice used in the manufacture, and of gluten and fibre derived from it.

ADAMS, JOHN, Victoria Park, Sheffield.—Furniture Polish, Plate Powder, Brass Polish. Citrate of Magnesia.

HEMINOWAY, S., and COMPANY, Bradford.—Baking Powder, Dry Soap, and Starch.

JAMES, E., and SONS, Sutton-road, Plymouth.—Starch for domestic and manufacturing purposes; Blacklead for domestic use.

BEWLEY and DRAPER, 23, St. Mary-street, Dublin.—Aërated Waters as Beverages and in Imitation of Natural Mineral Waters; Soda, Seltzer, Kali, and Lithia Waters; Lemonade, Ginger Beer, and Ginger Ale.

SUDDEN DEATH OF A CHEMIST AND DRUGGIST.—An inquest was held at Bournemouth to inquire respecting the death of Mr. John Mason, chemist and druggist, of that town. Evidence was given by the housekeeper of deceased that between five and six in the morning she heard a strange noise in the deceased's bedroom, but she had heard a similar noise before, and deceased upon being spoken to respecting it said it was only the nightmare. In the morning as deceased did not come down the door of his room was opened and he was found lying in bed dead. Mr. Nunn, surgeon, deposed that he was sent for a little before eight, and when he arrived Mr. John Mason appeared to have been dead about two hours. There was nothing in the appearance of the body to show the cause of death. A *post-mortem* examination was therefore ordered, and at the adjourned inquest Mr. Nunn stated that the heart was so diseased as to cause death by syncope, and that he had no doubt that was the cause of death. A verdict in accordance with this evidence was accordingly returned.

PRACTICAL FORMULÆ FOR MINERAL WATERS.*

By R. ROTHER.

THE preparation of mineral waters has become a recognised feature in the routine of pharmacy. The mineral water trade is now an important commercial branch of the business, so thoroughly engrafted that it is not considered creditable to a first-class pharmacy which has not all the waters constantly on draught the year around. The methods of manufacture have been greatly simplified, so that nearly all reputable pharmacists feel a particular pride in the circumstance that the artificial mineral waters they keep on draught have been prepared in their own establishment. The notion of extreme, almost analytical, accuracy in their production, has been abandoned as impracticable and useless, which only tended to favour the traffic in perfectly abominable and outrageously misrepresented concoctions of ignorant impostors, who manufactured the mixed chemicals at wholesale. But thanks to the enlightened character of the profession, the millennium of these swindlers has nearly passed.

The methods of preparing the waters by the more recent change are, however, in strict conformity with the analyses, only that unimportant and useless ingredients have been dropped, and the proportions of others brought into more practical limits, without, however, losing sight of the fact that the artificial product must be a practically accurate imitation of the natural water; that it must be based upon a legitimate modification, or scientifically improved interpretation of the original analyses, a wanton violation of which should never be permitted.

Experience has shown that the iron in all waters, excepting Pyrmont, had to be abandoned, on account of objections the consuming public entertained against the ferruginous flavour; and since the waters are mostly used simply as a pleasant beverage, and not as medicine, it was, therefore, highly expedient to conform with public opinion. On practical grounds, it was also found proper to exclude silicic oxide from the waters entirely. No foreign ingredients should be introduced not indicated by the analysis; and, therefore, organic acids for keeping iron in solution should not be used. Pyrmont is the only water which requires this metal, and in that particular instance it ought always to be introduced into the air-free fountain, which is accomplished readily by first charging with a pressure of about 20 lbs., re-opening the fountain, and after adding the iron, preferably in the condition of ferrous sulphate, charging with any desirable pressure, although highly charged waters are always preferred.

The quantities in the formulæ are given in avoirdupois ounces, quarters, eighths, and sixteenths, and the processes are so constructed that no solution need be kept on hand, except the concentrated chloride of calcium and chloride of magnesium solutions. The simple methods, and numbers indicating the quantities admit of rapid extemporaneous processes, and the formulæ are worked out for twelve-gallon fountains, which readily accommodate 100 pints of the finished water.

The application of pure concentrated solutions of calcium and magnesium chlorides cannot be too strongly recommended in preference to the dry fused material as found in the market. Aside from indefinite composition, owing to their strongly hygroscopic disposition, the fused form of these salts is extremely inconvenient for ready manipulation. Moreover, their market price is disproportionately high compared with the product obtained in the form of concentrated solutions. A large quantity made at one operation will suffice even for a great demand during the whole season. The advantage of the liquid form infinitely compensates every disadvantage which the relatively easy process of the manufacture may possess, the most objectionable feature of which consists in assaying the product. But a direct analytic assay is by no means absolutely required, as the strength of the solutions can be quite accurately found by their specific gravity. By the help of the specific gravity bottle we are enabled to graduate the solutions with ease and precision. After the excess of lime

* From the *Chicago Pharmacist*.

has subsided from the crude solution, the clear liquid is decanted, filtered, and deodorised. The specific gravity is now determined and the solution evaporated or diluted to a volume or weight which bears a simple ratio to the salt it contains. It is more convenient to graduate it by volume, but more accurate to adjust it by weight. The magnesium chloride solution is also treated in a similar manner.

According to Gerlach the specific gravity of a solution of calcium chloride containing 40 per cent. by weight, is 1.40330; 37 per cent. 1.36790; 35 per cent., 1.34430, 33 per cent.; 1.32174; 30 per cent., 1.28789; 25 per cent., 1.23365; and 20 per cent. 1.18222; and of magnesium chloride a solution containing 35 per cent., is 1.33397; 33 per cent., 1.31213; 32 per cent., 1.30121; 30 per cent., 1.27937; 25 per cent., 1.22737; and 20 per cent., 1.17800. Ordinary commercial chlorhydric acid yields on an average a solution of calcium chloride of the specific gravity 1.3185 without evaporation; containing therefore nearly 33 per cent. of anhydrous salt. One pint of the solution will then weigh 9613.4472 grains and represent 3172.4376 grains, or 7 $\frac{1}{4}$ ounces avoird., anhydrous, calcium chloride. Hence it requires but little evaporation to contain half an avoird. ounce in the fluid ounce.

KISSINGEN (RAKOCZY.)

Take of potassium bicarbonate, cryst.	$\frac{3}{4}$	ounces avoird.
Sodium	2	" "
Magnesium sulphate cryst.	3	" "
Sodium chloride (pure)	8	" "
Calcium chloride (anhydrous)	2 $\frac{3}{4}$	" "
Water sufficient.		

Pulverize the potassium bicarbonate in a suitable mortar, add the sodium bicarbonate and magnesium sulphate and triturate the mixture after the addition of a pint of water until the potassium and magnesium salts are dissolved. Pour the magma into a No. 50 hair sieve, firmly supported on a funnel inserted in the mouth of an appropriate hottle, and wash it through with another pint of water gradually added while constantly stirring with the pestle. Place the sodium chloride in the mortar, add one and a half pints of water, and stir until solution is nearly completed. Then pour the mixture also through the sieve, and follow with the calcium chloride first dissolved in a few fluid ounces of water, carefully washing down any remaining salt, until the whole mixture is brought to the measure of four pints. Shake this well, rinse it thoroughly into a fountain containing twelve gallons of water, and impregnate it with carbonic acid, preferably under a high pressure. It must be observed that the calcium chloride should be added last, dissolved in the smallest amount of the available water, because an undesirable effervescence of carbonic acid takes place if the first liquid is not properly diluted before its addition. Should the operator desire the ferrated water, a light charge of about twenty pounds is first put on, so as to free the water from air; the fountain is then re-opened, and after the introduction of one-eighth of an ounce avoird. of crystallized ferrous sulphate, again closed and the charge finished as before.

CONGRESS.

Take of Potassium bicarbonate cryst.	$\frac{3}{4}$	ounces avoird.
Sodium bicarbonate	5 $\frac{3}{4}$	" "
Magnesium sulphate cryst.	3 $\frac{3}{4}$	" "
Sodium chloride (pure)	2 $\frac{3}{4}$	" "
Calcium chloride (anhydrous)	3 $\frac{3}{8}$	" "
Water sufficient.		

Dissolve the calcium chloride and magnesium sulphate each in twelve fluid ounces of water. Mix the solutions, and after ten or fifteen minutes strain the liquid through muslin with thorough pressure. Powder the potassium bicarbonate by trituration in a mortar, add the sodium chloride and bicarbonate, mix the whole with a pint of water, constantly stirring, and pour the magna through a No. 50 hair sieve, following with another pint of water, then with the calcium and magnesium solution first obtained, and finally with more water, until the united liquids measure four pints. Shake the mixture, pour it into a fountain containing twelve gallons of water, and charge with the highest desirable pressure. Or when magnesium chloride can be had, then,

Take of Calcium chloride (anhydrous)	2	ounces avoird.
Magnesium chloride (anhydrous)	1 $\frac{1}{2}$	" "

Dissolve the salts in a pint of water and mix the solution with the other ingredients, as before, completing the water in the manner directed.

VICHY (GRAND GRILLE).

Take of Potassium bicarbonate cryst.	$\frac{5}{8}$	ounces avoird.
Sodium	10	" "
Sodium phosphate cryst.	$\frac{1}{2}$	" "
Magnesium sulphate cryst.	1 $\frac{1}{8}$	" "
Sodium chloride (pure)	$\frac{1}{4}$	" "
Calcium chloride (anhydrous)	$\frac{4}{8}$	" "
Water sufficient.		

Rub the sodium phosphate and potassium bicarbonate together in a convenient mortar, add the sodium chloride, magnesium sulphate, and sodium bicarbonate, stir the mixture with two pints of water, pour the magma into a No. 50 hair sieve, and rub it through with the aid of more water. Dissolve the calcium chloride in four fluid ounces of water, pour the solution through the sieve, and add sufficient water if necessary to make the whole liquid measure four pints. Shake it well, then wash it perfectly into a fountain containing twelve gallons of water, and apply the requisite high pressure of carbonic acid gas.

(SELTERS.)

Take of Sodium bicarbonate	3 $\frac{7}{8}$	ounces avoird.
Sodium chloride (pure)	2 $\frac{1}{2}$	" "
Calcium chloride (anhydrous)	1 $\frac{1}{2}$	" "
Magnesium sulphate cryst.	1 $\frac{1}{8}$	" "
Water sufficient.		

Dissolve the calcium chloride and magnesium sulphate each in four fluid ounces of water, mix the solution, let stand ten or fifteen minutes, and strain through muslin with pressure. Mix the sodium chloride and carbonate with a pint of water, pour the mixture through a No. 50 hair sieve, follow with the calcium and magnesium chloride solution, and then with water, until the whole measures four pints. Shake up the mixture, pour it into a fountain containing twelve gallons of water and charge with the requisite pressure of carbonic acid. If the magnesium chloride is used, then

Take of Calcium chloride (anhydrous)	$\frac{1}{2}$	ounce avoird.
Magnesium chloride (anhydrous)	$\frac{1}{2}$	" "

Dissolve the two chlorides in eight fluid ounces of water, and add the solution through the sieve to the other materials, completing the process precisely as before.

BITTER WATER (FRIEDRICHSALL.)

Take of Sodium bicarbonate	$\frac{7}{8}$	ounces avoird.
Sodium sulphate cryst.	1 $\frac{1}{4}$	" "
Potassium sulphate	$\frac{3}{8}$	" "
Magnesium sulphate cryst.	20	" "
Sodium chloride (pure)	10 $\frac{1}{4}$	" "
Calcium chloride (anhydrous)	1	" "
Water sufficient.		

Mix the sodium and potassium sulphates by rubbing them together in a mortar. Add the magnesium sulphate with three pints of water and stir until dissolved. Introduce the sodium chloride and carbonate, continue the stirring a few minutes, and pour the mixture into a No. 50 sieve, dissolve the calcium chloride in half a pint of water, add it to the other mixture through the sieve, and follow with water if necessary to measure four pints, or until the salt is well washed down. Shake the liquid, pour it into a fountain containing twelve gallons of water, and charge it only with a moderate pressure.

PYRMONT (TRINKQUELLE.)

Take of Calcium chloride (anhydrous)	2 $\frac{1}{8}$	ounces avoird.
Sodium carbonate (crystallized)	3 $\frac{1}{4}$	" "
Sodium sulphate (crystallized)	3 $\frac{1}{4}$	" "
Magnesium sulphate (crystallized)	1 $\frac{1}{4}$	" "
Ferrous sulphate (crystallized)	3-16	" "
Water sufficient.		

Dissolve the calcium chloride in half a pint of water, and the sodium sulphate and carbonate together in one pint of water, with heat; filter the solution, and while yet hot, add to it the solution of calcium chloride. After ten or fifteen minutes the precipitate will have contracted to a heavy powder at the bottom of the bottle. The supernatant liquid is then decanted without losing any of the precipitate. To the sediment then add the magnesium sulphate, shake thoroughly, and rinse it well into a fountain containing nearly twelve and a-half gallons of water. Charge with a pressure of about twenty pounds, re-open the fountain, throw in the ferrous sulphate, coarsely powdered, and finish the charge with a high pressure.

If the residuary calcium sulphate resulting as a waste in several of the formulæ is preserved and dried, the process, with its use, may be modified as follows:—

Take of Magnesium sulphate (crystallized)	1½	ounces	avoird.
Calcium carbonate (precipitated)	1½	"	"
Sodium chloride (pure)	1½	"	"
Calcium sulphate (dry)	1½	"	"
Ferrous sulphate (crystallized)	3-16	"	"

Mix all but the ferrous sulphate with a pint of water, pour the magma through a No. 50 sieve, wash it into a fountain containing about 12½ gallons of water, and complete the process with the introduction of the ferrous sulphate and impregnation with high pressure, as before.

ECHOES FROM THE BOARD; OR REMINISCENCES OF THE MAJOR EXAMINATION.

BY A FULL-FLEDGED PHARMACIST.

SOME months ago I placed before the readers of the CHEMIST AND DRUGGIST, in a paper entitled "Behind the Scenes," a brief *résumé* of the educational resources of the School of Pharmacy. My observations then created, as I soon found out, a considerable storm in the Society's tea-cup. Of categorical denial, however, there was none, the only attempt in that direction manifesting itself in a rather obscurely-worded letter in the *Pharmaceutical Journal*, from a Laboratory Student and Bell Scholar. I had, moreover, the satisfaction of receiving from a gentleman—an esteemed member of the late Council—otherwise unknown to me, a letter, expressing unqualified approval of the statements I had made; and other tones of assent were heard in various high quarters.

The new Council came in, happily, without leaving its ideas of business altogether at home; a rigid investigation was organized, and the present revolutionary measures were adopted.

It is not necessary for me to state here the exact period at which I passed the Major examination. Let it be sufficient, that it was some time during the past session. Having been allotted a position high on the list of honours I ought perhaps, if only from feelings of benevolence, to have blessed the examiners, pocketed the glory, and held my tongue. And so perhaps I might, had it not been for the gigantic "puff," which took the form of a letter to the *Pharmaceutical Journal* of August 2nd.

"O wad some power the giftie gie us
To see ourselves as others see us."

And if the presiding genii at Bloomsbury-square could but understand what a ludicrous performance is the continual blowing of one's own trumpet they might perhaps be anxious to appear rather less ridiculous. It is to me a matter of considerable regret that the local secretary, who, "by virtue of his office," was invited to inspect the examination room, was not able to furnish us with any observations on the conduct of the Major ordeal. I am anxious to know whether he would have recognised in some of the departments old friends of seventeen years ago. I may, however, be able in some measure to supply the deficiency by the relation of a few facts out of my own experience, and as that is recent, the incidents may be all the more interesting.

I was, as before stated, a student, not long since, in the

School of Pharmacy, which, let it be remembered, does not profess to prepare its pupils for the examinations, but only seeks to impart to them scientific knowledge; may be without end or aim (*vide* Mr. Williams' speech at the last meeting of Council). As perhaps in most examinations, and certainly not least in the pharmaceutical, there are a number of catch questions, favourites with certain examiners, with which it is absolutely necessary candidates should be acquainted. We used, therefore, at Bloomsbury-square, to make a point of collecting as many of these questions as possible, and it was a rule in student-eliques, that each fellow who went up for examination should afterwards furnish his friends with the questions put to him. It was the only way, let it be remembered, open to the students of getting an idea as to the points which it was necessary more particularly to study, and it was a practice which could have been completely vitiated by the examiners, if they only did their work thoroughly. I have known good men, thoroughly well up both in the theory and practice of pharmacy, plucked for want of a little priming in a few catches, and others with not one tithe of the capability, pass triumphantly, simply from having made good use of a collection of stock questions.

Perhaps of all the absurdities which it were possible for the pharmaceutical mind to conceive, the subject in the Major, known as "theoretical dispensing," is the greatest. How country candidates, ignorant of the crotchets of their examiner, fare, is a subject too painful to discuss. I only know that the whole affair was a standing joke amongst ourselves. Some little time before I thought of presenting myself for the examination, I began to collect all the questions I could hear of, and the manuscript book which holds the once precious morsels now lies open before me. I think I must have collected from various sources all the questions which ever had been, or were ever likely to be, propounded as to the theory of dispensing. Some, I know, copied from ancient note-books, must have been periodically asked from almost time immemorial; and when at length I found myself before the examiner, and heard him bring out one by one his old favourites—all of which, of course, I knew by heart—it was with the greatest difficulty I preserved the requisite perplexity of countenance. Many, no doubt, who have taken their diploma within the last few years will remember that it is necessary to send out a mixture containing syr. ferri iodidi with a coil of iron wire inserted into the cork. They will also know if there is any objection to rolling blue pills in magnesia, and be prepared to swear that the yellow colour of Ung. cetacei is due to the *chlorine* used in bleaching the wax. They will bear in mind that soluble cream of tartar is a good general excipient for pills, and recollect how to dispense powders containing Epsom salts and chloride of ammonium. The colour of the following mixture, too, will not be forgotten:—

R Tinet. ferri perchlor.
Acid phosph. dil.
Liq. strychniæ.
Aque destill.

nor the method of dispensing—

Inf. gent. co., ad ʒvj.
Ferri sulph., gr. xv.
Acid. sulph. dil., ʒj.
Aque dest., ʒij.

though the reason thereof has always been a matter of speculation.

And so I might go on, till I filled this paper with "straight tips," but the instances I have given will show that in theoretical dispensing neither examiner nor student gets much variety, that the questions are in most cases well known, and that therefore in such cases the whole thing is little more than a great farce.

Now let me say a few words with regard to prescription reading. Speaking critically, it is manifestly illogical to certify in the Minor examination that a candidate is competent to read prescriptions, and then in the Major to test him again in the same subject. Either he is or he is not capable of dispensing. If he is not, he ought not to have been allowed to pass the Minor (which, as far as the public is concerned, gives him equal rights with a pharmaceutical chemist), and if he is, it is simply a work of supererogation to re-examine him. In the Major, however, he is expected

to translate into Latin prescriptions written in English, and also to be well up in posology. Now this would be all very well if the candidate were only permitted the advantage of a little variety, at present denied him. The prescription which I had, for instance, was one which I knew had been given every month in the session previously, and from inquiries I have made I find it is the only one which has been in use since. The directions were as follows:—"A quarter part to be taken every second morning if the bowels are relieved," and I can confidently appeal to candidates who have presented themselves during the past ten months to testify to the correctness of my statement. But I can say more than this. A friend of mine who passed very recently had in his possession the questions put to his brother more than two years ago, and amongst them was this identical prescription. It seems to me, therefore, most probable that it is a veteran which has been handed down, month after month, for at least three sessions, and by this time I hope no candidate fails in English translation. With posology, too, it is just the same. I know a student who passed in March last, and who had carefully got up a list of the doses which had been asked in the previous months; he not only had the same doses, but they were arranged in precisely the same order as that in which he had learnt them. My remarks by no means apply to the examination as a whole. They are only intended to criticise one or two weak points. No examination could be more thorough than is the Major in Pharmacy, Botany, and most especially Chemistry, the practical work in which is, in my opinion, the finest thing ever attempted at Bloomsbury-square. It precludes the possibility of cram, has no horrors for even the most nervous of candidates, and is altogether so efficiently conducted that good men are just as sure of success as others are of failure. It is, therefore, I think, all the more to be regretted that it should be stultified by the continuance of the practices I have referred to, or even by the perpetuation of such a subject as "theoretical dispensing."

I wish the gentleman who has been "put up" to trumpet forth the glories of the examination-room had been rather more particular in his phraseology. His cause would not have been more damaged, nor his meaning rendered more obscure. The prescriptions he thinks are not "selected on account of their difficult nature, but are a fair representation of what would be met with in the ordinary run of an dispensing business." Considering, however, that they are the dregs of dispensing houses in all parts of the empire, I must beg, for the credit of the medical profession in the matter of caligraphy, to seriously impugn that statement. The *Materia Medica* collection, he informs us, is not accessible to students as formerly, and the specimens consequently "do not run any risk of being handled or crushed." I am not aware what amount of "access" was allowed in former times, but as the present collection is pretty freely pulled about by upwards of sixty candidates every month, I think it receives a fair share of "handling." The samples of rhubarb for instance are so begrimed that a man must make a rare guess if he succeeds in distinguishing *Rheum Rhaponticum* from *Rheum Officinale*. The aloe, too, is almost as old as the society itself; one piece—*hepatic* I think—an examiner said the other day numbered forty years. In reference to dispensing, says the local secretary, "I was shown the result, in two cases, in the preparation of an emulsion from the same prescription, and with drugs out of the same bottles—one was beautifully mixed, and as much like milk as possible; the other almost looked dirty and badly mixed." As I can't find a definition of the state of combination, indicated by "almost badly mixed," I must pass this without comment. Coming to Botany, he goes on, "In the botanical department I saw a collection of fresh medicinal plants, also a collection of dried specimens, and on inquiry I found the latter were for those candidates who never had any facility for studying from fresh plants." Now as the latter facility is open to every inhabitant of these islands, I conclude the remark quoted is intended to apply to students who have the misfortune to reside where vegetation is scarce—in the desert of Sahara, for instance, where perhaps *dried* specimens are not so rare as they are in this country. But now—casting his eye over the calm and peaceful scene around him—the visitor concludes, "Although there were many candidates to be examined, I was much struck with the patient and quiet manner in which everything was conducted, and however nervous a candidate may

be before he enters the room, it certainly ought to disappear (query, which? the room or the candidate) when he experiences the nice familiar way that each examiner accomplishes his task, as no one but the examiner and his candidate can hear what is said; in fact, it more represents two gentlemen engaged in a quiet drawing-room conversation, and I can imagine the pain it must cause (to whom?) when a badly-prepared candidate presents himself—but this should be avoided as much as possible." I don't know to whom the latter sage remark applies, nor do I think an ordinary individual would be much impressed by the serene aspect of the faces around him—the imagination might certainly transfer the scene to a drawing-room, but it would be that of a dentist.

When the post of resident-trumpeter at Bloomsbury-square falls vacant, I mean to apply for the appointment, and if the salary given is proportionate to that of its other less important, because harder worked, officials, I think I may manage to keep clear of the workhouse.

CHEMISTS' AND DRUGGISTS' SOCIETY OF IRELAND.

A MEETING of the above Society was held in accordance with Rule VII. on Monday evening, August 4th, at 44, Molesworth-street, for the election of officers for the ensuing year. There was a good attendance of members. The chair was taken by Mr. P. T. Bermingham, T.C. The minutes of the last meeting having been confirmed, the following gentlemen were admitted to membership:—Mr. J. Laird (Limerick) and Mr. H. Bell (Waterford). After considerable discussion connected with the prices of various articles in the trade, and the vending of poisonous substances by grocers and others, it was agreed to publish a retail price list similar to the one published by the Glasgow Chemists' Association. Several amendments to the rules (of an unimportant character) were agreed to. The number of the committee was reduced from nine to six, three to form a quorum.

The election by ballot for officers for the ensuing twelve months was then proceeded with, with the following results:—President, E. M. Hodgson, Esq.; Vice-President, William Allen, Esq.; Hon. Treasurer, J. Goodwin, Esq.; Hon. Secretary, William Hayes, Esq. Committee—P. T. Bermingham, Esq., T.C.; W. L. Erson, Esq., J.P.; J. H. Grindley, J. A. Ray, R. Simpson, and W. F. Wells, Esqs. It was agreed to appoint a gentleman as assistant-secretary and librarian, and applicants were requested to communicate with the hon. secretary.

It is intended to establish a library and reading-rooms, and to make arrangements for the delivery of lectures and formation of classes during the winter months.

Pharmacy.

AROMATIC TINCTURE OF ASSAFETIDA.

MR. L. MYERS CONNOR in the *American Journal of Pharmacy*, suggests the following formula for a less disagreeable form of administering assafetida than is usual employed.

Rx. Tinct. Assafetida, U. S. P. ʒviij
 „ Orange-peel, „ ʒij
 Eas. Peppermint ʒiij

Mix.—Dose, one and a half to two fluid-drachms, with the addition of water.

COLORATION OF WOODS.

The *Moniteur de la Teinture* recommends first to treat the woods with a solution of 0.5 kil. chloride of lime, and gms. crystals of soda in 6 litres of water, then to plunge them into a solution of sulphurous acid, and to wash. Dipping them first into a solution of Marseilles soap, and then into one of any one of the aniline reds, will give a good dye. For violets, a bath of 125 gms. olive oil, with 125 gms.

calcined soda, and 1.5 litres boiling water, to be followed by a bath of aniline red, is recommended. For blues, aniline blue instead of aniline red is to be used, as for the violets; for greens, a mordant of alumina acetate followed by a decoction of Persian berries with indigo carmine. For yellow, mordant as for greens and dye with turmeric or quercitron. For brown, mordant with potassium chromate and dye with fustic or red wood. For gray, treat with a solution of orchil followed by one of ferric nitrate. For black, soak for 24 hours in a bath of logwood and copper sulphate, then for 12 hours in a solution of ferric nitrate.

CHLORAL HYDRATE AS AN ANTILEPTIC.

According to M. Jacobsen in *Le Technologiste*, one-half per cent. of chloral hydrate in a solution of egg albumen will preserve it, according to M. Jacobsen, for an indefinite period.

MEANS OF PRESERVING FABRICS, ETC., FROM FIRE.

M. Patera proposes, instead of sodic tungstate, a mixture of four parts borax with three parts magnesian sulphate. 100 grms. of the mixture are to be dissolved in 300 to 400 c.c. of water, and into this solution the fabrics are placed until soaked, then wrung out, dried and ironed. Another mixture proposed for the purpose is that of ammoniac sulphate and gypsum.

IMPROVED FORMULA FOR CAMPHOR WATER.

By Wm. B. Addington, Norfolk, Va.

Rx	Camphoræ.	...	...	...	...	3iv.
	Magnes. Carb.,	...	...	...	...	3ij.
	Aquæ Destillat.,	...	...	...	...	Oiv.
	Alcohol.	...	...	...	...	q. s.

Take just enough alcohol to dissolve the camphor and bring it to a liquid state; while liquid add the magnesia and triturate (during this time the alcohol will evaporate). Then mix the water, as usual, and filter. By making a perfect solution of the camphor, the particles are thoroughly divided, whereas by the U. S. P. process only enough alcohol is added to break up the adhesion of its particles and reduce it to powder, and all must have noticed the numerous small grains of camphor left on the filter by the present process. Camphor water is made by the process I suggest in one-half the time; magnesia is saved by it, and all the camphor directed is taken up in the solution. By the present process it is not. There is no deposit formed on the bottom or sides of the jar by standing. I have tried this formula for the last eight months, and am very much pleased with it.—*Canadian Pharmaceutical Journal*.

NEW COMPOUND OF BICHLORIDE OF MERCURY AND BROMIDE OF POTASSIUM. BY E. B. SHUTTLEWORTH.

If to a solution of bromide of potassium be added an equivalent proportion of bichloride of mercury, in powder, the latter salt dissolves quite readily, and a solution is formed which, when evaporated, affords needle-shaped crystals, consisting, apparently, of a definite compound of the two salts; or it may be that an interchange of elements takes place, and that the new salt is composed of bromide of mercury and chloride of potassium. The solution deposits crystals of the same form even when evaporated to the last drop. These crystals are permanent in the air, and when just removed from the mother liquor are transparent, but, on drying, become white. The salt dissolves readily in water. It gives, with iodide of potassium, a scarlet precipitate of biniodide of mercury; with nitrate of silver, a precipitate of bromide; with chlorine water, followed by chloroform, a solution of bromine in the latter liquid.—*Canadian Pharmaceutical Journal*.

PODOPHYLLIN IN CONSTIPATION.

Dr. Constantin Paul lately read a paper on this drug at the Société de Thérapeutique, which has been published in the *Gazette Médicale de Paris*. He considers this remedy one of the most reliable in habitual constipation. He began by combining it with belladonna, as advised by Trousseau and others. When belladonna did not agree, he substituted hyoscyamus. He has now discarded all adju-

vants, and recommends a small dose of podophyllin made into a pill with honey, to be taken every night. It usually produces a single evacuation each morning. Should there be more effect after a few days, he omits the dose for a night or two.

ACTION OF NITROUS OXIDE.

Joylet and Blanche (*Archives de Physiologie*, v., July, 1873, p. 364) have obtained the following results from their experiments on this subject. Chemically pure nitrous oxide will not support the respiration either of animals or plants, as they cannot decompose the gas. When breathed in a pure state by animals, it causes asphyxia and death, with all the symptoms usually occasioned either by strangulation or by the respiration of an inert gas, such as nitrogen or hydrogen. Nitrous oxide causes death in nearly the same time as these other asphyxiating agents. Nitrous oxide has no special anæsthetic action. The anæsthesia which it may produce when inhaled in a pure condition is only due to want of oxygen in the blood. Insensibility appears when the oxygen in arterial blood is reduced to less than 2 or 3 per cent. Arterial blood is then very dark, and contains 30 to 40 per cent. of nitrous oxide. Animals can live and show no alterations of sensibility while breathing mixtures of nitrous oxide and oxygen, in the same proportion as nitrogen and oxygen in air. The arterial blood then contains about 30 to 35 per cent. of nitrous oxide. Birds placed under a bell-jar filled with this mixture behave exactly like those placed in a jar of the same size filled with air, and die after having exhausted the oxygen to a similar extent and formed a similar amount of carbonic acid. As nitrous oxide is an irrespirable gas and does not possess the anæsthetic properties which have been attributed to it, the authors conclude that its employment cannot but be dangerous, and ought, on this account, to be excluded from medical practice.

OXYMALEIC ACID.

M. Bourgoïn gives the above name to a new organic acid which he states differs from maleic acid by two equivalents of oxygen, and from maleic acid by two equivalents of hydrogen. Thus: Maleic acid = $C^6H^4O^4$, oxymaleic acid = $C^6H^4O^{10}$, malic acid = $C^6H^6O^{10}$. The new substance is solid, white, and of an odour similar to that of malic acid. It is very soluble in water which it abandons on evaporation, under the form of very delicate, long, penniform crystals. It is equally soluble in alcohol and in ether, separating itself from the latter vehicle in the shape of elongated crystals grouped in stars.

SUBSTITUTES FOR TEA.

The American Agricultural Bureau brings maté under attention, and by comparative analysis proves that yupon, maté, and tea and coffee all contain the same active principle—thein. Maté, says the *Philadelphia Medical Reporter*, is a Peruvian weed, largely indulged in by Indians and half-breeds. It is concocted in a small silver porringer, with a tight lid and a small spout, which spout goes the round of the blackened mouths of the maté-sucking circle. It is a great breach of etiquette in Peru to refuse to take maté on such conditions. The last proposition is to supplant tea and coffee by "yupon," and the proposition also comes from the National Department of Agriculture. "Yupon" is an Indian word, and the plant itself is the cassine yupon, the *Ilex cassina*, a diuretic, and in large quantities emetic. It was used by the aborigines and also by the "poor white folks" in former days.—*Brit. Med. Journ.*

OZONE BY SLOW OXIDATION.

If a small quantity of petroleum benzine be placed in a large vessel and exposed to direct sunlight for a few days in summer, the vessel being frequently opened and shaken, the air in the vessel will contain ozone. The same change will take place in diffused daylight, or even in the dark and at a low temperature, but a much longer time is required. The slow evaporation seems to be the chief cause of this. This has been observed by Fudakowski, who published a full description of the oxidizing action of this active benzine in the "Proceedings of the Berlin Chemical Society."

Homœopathy.

TAMPERING WITH HOMŒOPATHIC MEDICINES.

THE *Homœopathic Review* refers to Messrs. Leath and Ross's letter in our last issue, and adds the following catholic-minded remark:—

"There is nothing new in all this—neither is it so uncommon as Messrs. Leath and Ross seem to think that it is. In short, so frequently have similar observations been brought before us, that we have for long dissuaded patients and others from obtaining their medicines from allopaths."

Neither homœopathic nor allopathic physicians have any right to make such sweeping imputations as are here insinuated on a body of men like the chemists and druggists of Great Britain. But it is to be regretted that a few black sheep should give any shade of justification to such calumnious observations. We think it worth while to refer thus prominently to this subject in order that the disgraceful practices alluded to by Messrs. Leath and Ross may be entirely rooted out.

A correspondent, expressing indignation at the trick reported by Messrs. Leath and Ross, sends us his business circular, which contains the following straightforward paragraph respecting homœopathy:—

"In the new premises our custom of keeping these goods separate from the allopathic drugs will be continued; in this, as in all matters connected with homœopathy, we strictly carry out the Hahnemanian directions. We do not recommend and we do not deride homœopathy, for like other systems of medicine, it sometimes succeeds and sometimes fails. As a matter of trade, we endeavour honestly to supply exactly the article that is required by the homœopathic practitioner, and have always a large stock of tinctures, pilules, and globules of all kinds in their various dilutions. Books and oases. Homœopathic prescriptions dispensed. Homœopathic cocoa. Homœopathic medicines for cattle."

DR. POPE'S MEDICAL HANDBOOK FOR MOTHERS.

The popularity of homœopathy among ladies is evidenced by yet another of those semi-medical manuals, written expressly for the guidance of wives and mothers. The one now before us is by Dr. A. C. Pope (published by Turner and Co., London and Manchester), and it treats the subject in a very able manner. Dr. Pope is no mere apologist for homœopathy as a system of treatment; he is a strenuous advocate. His opening chapter is full of good sense, and leads up cleverly to his propositions respecting the superior value of homœopathic remedies. He insists that disease is not something like a tapeworm, which has got into the system and needs to be forced out by purgatives, diuretics, or sudorifics; but that it is merely a modification or derangement of the organs of the body, which diet, exercise, and occasionally a homœopathic medicine will regulate much more certainly and agreeably than by following out the allopathic system of treatment.

IN RE "BETTS' SUITS."

TO THE SUBSCRIBERS TO THE "DEFENCE FUND," AND ALL INTERESTED IN THE BETTS' PROSECUTIONS.

I HAVE now the pleasure to place before you a statement showing the various sums received in aid of the "Defence," and the expenditure incurred in resisting the prosecutions. I trust that the result of the litigation, which has extended over so many years, has been satisfactory to all concerned.

The auditors, whose signatures are appended to the balance-sheet, were appointed at the last meeting of the Committee.

Yours faithfully,

LIONEL NEWBERRY, Treasurer.

37, Newgate-street, E.C., August 1, 1873.

BETTS' SUITS.—DEFENCE FUND RECEIPTS.

August 11, 1865.

	£	s.	d.	£	s.	d.
Maw, Charles, Aldersgate-street	100	0	0			
Drow, Barron, & Co., Bush-lane	100	0	0			
Newbery, F. & Sons, St. Paul's-churchyard.	100	0	0			
October 21, 1870.						
Rimmel, E., Strand	100	0	0			
January 22, 1869.						
Barclay, R.	50	0	0			
Hills, T. H.	50	0	0			
Bowerbank & Son	50	0	0			
Edwards, Wm.	50	0	0			
Twinberron, Wm.	25	0	0			
Brooks, R. W. T.	25	0	0			
Sangor & Sons	25	0	0			
Hovenden, R., Jun.	12	10	0			
Blagden	12	10	0			
Dinnford & Co.	12	10	0			
Gallais	10	0	0			
Hockin & Co.	10	0	0			
Godfrey & Cooke	10	0	0			
Faulconer, R. S.	10	0	0			
Stevenson, Connaught-terrace	5	0	0			
Hall, Wigmore-street	5	0	0			
Warin, Blackman-street	5	0	0			
Roster, M. E., Bishopsgate-street	5	0	0			
Ellis, G. H., Finsbury	5	0	0			
Potts, R. M., South Audley-street	5	0	0			
Rouse & Co., Wigmore-street	3	0	0			
Taylor, J., Baker-street	5	0	0			
Bird, Castle-street	5	0	0			
Rouse, Clapham	2	2	0			
Parry & Garnham	2	0	0			
Verrier	1	0	0			
Rouse & Co., Wigmore-street	1	1	0			
Gull, Horsham	0	10	6			
RESULT OF FIRST APPEAL						
						802 3 6
1870.						
Deane, Henry, Clapham	2	0	0			
Giles & Son, Clifton	1	1	0			
Adams, Hertford	1	1	0			
Robbins, Oxford-street	1	1	0			
Jeffery, Tring	0	13	6			
Dauhoney, Shepherdess-walk	1	1	0			
Edwards, Dartford	0	5	0			
Pilley, Boston	0	5	0			
Gostling, Diss	0	5	0			
Bamford, Rochdale	0	2	0			
Peake, Walmer	0	2	6			
Rogerson, Bradford	0	10	0			
Darling, Manchester	1	0	0			
Bright, Peterborough	0	5	0			
Negus, Northampton	0	5	0			
Maunder, Manchester	0	5	0			
French, Gosport	0	5	0			
Marshall, Mile-end	0	5	0			
Whitaker & Grosnith, Fore-street	1	1	0			
Chubb, J. C.	0	5	0			
Clapham, Leeds	0	5	0			
Oakland, Nottingham	0	5	0			
Slatters, Notting-hill	0	5	0			
Jackson, Crediton	0	5	0			
Sills, Tunbridge Wells	0	5	0			
Bush, Paulton	0	2	6			
Cooper, West Hartlepool	0	2	6			
Gibbons, Weston-super-Mare	0	5	0			
Griffiths, " "	0	5	0			
Mathias, " "	0	5	0			
Rich, " "	1	1	0			
Mawson & Swan, Newcastle	1	1	0			
Walker, Maddenhead	0	2	6			
Gordclier, Sittingbourne	0	2	6			
Smart, Littlehampton	0	5	0			
Turner, Aylesbury	0	5	0			
Wilson, Croyland	0	10	0			
Smallwood, Macclesfield	0	5	0			
Wyke, Abergavenny	0	5	0			
Williams, Hereford	0	1	0			
(A Friend from), Hereford						
Hinds and Assistants, Coventry	0	7	6			
Wilday (at Bates), Bicester	0	2	6			
Teed, Exmouth	0	5	0			
Nicholson, Tunbridge Wells	0	10	0			
Entwisle, Leeds	0	5	0			
Wild, Hyde, Manchester	0	3	0			
Waddington, Thornton	0	2	6			
Thomas, Merthyr Tydvil	0	2	6			
Collings, Littlehampton	0	2	6			
Welbome, Broughton	1	1	0			
Macfarlane, Edinburgh	1	1	0			
Brown, Manchester	0	10	0			
Owen, Bishop's Castle	0	5	0			
Hall, Hull	0	5	0			
Hadfield, Congleton	0	5	0			
Williams, Cardiff	0	5	0			
Cadman, Folkestone	0	3	0			
Foad, Looe, Cornwall	0	2	6			
Hadfield, Rochdale	0	2	6			
Watson, Chipping	0	2	6			
Gadd, Kingsland	0	10	0			
Bishop, Eyo	0	5	0			
Goodwin, Clapton	0	10	0			
Garsido, Southport	0	5	0			
Carried forward						
	£26	1	6	£802	3	6

	£	s.	d.	£	s.	d.
Brought forward..	26	1	6	802	2	6
Whitfield & Son, Worcester	0	10	0			
Confield & Son, St. Day	0	5	0			
Bull, Royston	0	10	0			
Richmond, Leighton Buzzard	0	2	6			
Houghton, Preston	0	10	0			
Goddard, Leicester	0	10	0			
Kay, Stockport	0	5	0			
Gordelier, P. W. G., Sittingbourne	0	2	6			
Freeland, Bathgate	0	2	6			
Fox, Bethnal Green-road	1	1	0			
Bray, Buntingford	0	5	0			
Wood, Hahfax	0	5	0			
Binge, Pimlico	0	5	0			
Williams, Now Cavendish-street	1	1	0			
Attfield, Bloomsbury-square	1	1	0			
Groves, Weymouth	1	1	0			
Jenner, Hailsbam	0	2	6			
Walpole, Great Yarmouth	0	10	0			
Payne, Wallingford	0	5	0			
Howell, Peckham	0	5	0			
Lloyd, Bridgend	0	3	0			
Millidge, Newport	0	2	6			
Lang, Sydenham	0	5	0			
Pheysey, Seaforth	0	10	0			
Guest, Nottingham	0	5	0			
Archer, Leeds	1	0	0			
Lloyd, St. Paul's-road	0	5	0			
Hockin, Liverpool	0	5	0			
Tomlinson, Lincoln	0	3	0			
Barraclough, Leeds	0	3	0			
Jameson, Reating	0	5	0			
Bartlett, Chelsea	0	10	0			
Ireland & Son, Egremont	0	5	0			
West, Manchester	0	5	0			
Freeland & Co., Barrhead	0	2	6			
RESULT OF SECOND APPEAL	39	8	0			

Herrings & Co., Aldersgate-street	21	0	0
Burgoyne & Co., Coleman-street	10	10	0
Barron, Harveys & Co., Giltspur-street	10	10	0
Horner & Co., Bucklersbury	10	10	0
Rowland & Sons, Hatton-garden	10	10	0
Hearon & Co., Coleman-street	10	10	0
Allen, Henry	5	5	0
Howard, D.	5	5	0
Howard, W. D.	5	5	0
Howard, J. E.	5	5	0
Howard, S. L.	5	5	0
Pratt, E.	5	5	0
Pears, A. & F.	5	0	0
"Chemist & Druggist" (and one page of Journal free)	5	0	0
Barrs Brothers, Leadenhall-street	5	0	0
Hill & Son, Little Britain	3	3	0
Van Duzer, S. R., Holborn	3	3	0
Millard & Son	2	2	0
Bates, Macclesfield	0	5	0
Crosse & Blackwell	2	2	0
Blumberg & Co., Cannon-street	3	3	0
Burgess & Son	0	10	6
Rimington, Bradford	0	10	0
Parkinson	0	10	0
Evans, Lescher, & Evans	10	10	0
Smith, F. W.	2	2	0
Hockin & Co.	2	2	0
Bell, J. & Co.	25	0	0
Hovenden & Sons	12	10	0
Davy, Yates, & Co.	5	5	0
Cleaver & Sons	5	5	0
Caley, Norwich	1	0	0
M'Culloch, F.	1	1	0
Bostock, Ashton-under-Lyne	0	3	0
Cheetham, Brixton	0	2	6
Kemp, H. H., Holloway	0	2	6
Ashford, H. S., Clapham	0	2	0
Orpe, T. M., Old Kent-road	0	5	0
Feltwell, Hammersmith	0	2	6
Appleton, Curzon-street	0	5	0
Hadfield, J., Congleton	0	2	6
Field & Co., Camden-town	0	10	0
Betty, S. C., Camden-town	6	10	0
Bottle, Dover	5	0	0
Haselden, A. F.	3	3	0
Deane, H., Clapham	1	1	0
Beaufoy & Co.	0	5	0
Corke, Ticehurst	0	5	0
Cole, Stoke Newington	0	5	0
Tomlinson, Lincoln	0	5	0
Newman, Bewdley	0	5	0
Jones, Kentish-town	0	5	0
Pattison, St. John's-street-road	0	10	0
Blagden & Co.	12	10	0
Chester Chemists' Association	2	15	0
Jackson, Manchester	5	0	0
Ismay, Newcastle	1	0	0
York Glass Bottle Co.	5	0	0
Mayo & Co.	2	2	0
Mackereith, Ulverston	0	10	6
Sanger & Sons, Oxford-street	25	0	0
Dinacford & Co.	12	10	0
Kingsford & Co., Piccadilly	5	0	0
Schacht, W.	5	0	0
Moggeson & Co.	10	0	0

Carried forward.. 299 7 6 841 11 6

	£	s.	d.	£	s.	d.
Brought forward	299	7	6	841	11	6
Wright, Clapham	5	0	0			
Schweppé & Co.	3	3	0			
Thompson, New North-road	1	0	0			
Fincham, Baker-street	2	10	0			
Bourdas, J.	10	0	0			
Izod, Norwood	2	2	0			
	323	2				

£1,164 14

BALANCE SHEET (1873).

Cr.						
1865	Result of First Appeal	..	..	..	..	£802 3
1869	" Second "	..	..	..	..	39 8
1870	" Third "	..	..	..	..	323 2
1869	Interest on Current Account	..	..	..	..	£1,164 14
1870	" " "	..	..	..	..	1 3
		..	..	..	..	1 15 1

£1,167 12 1

1866, Jan. 16.	By Cash to Flux, Legal Expenses	..	..	..	..	£200 0
1870, April 4.	" " " "	..	..	..	..	100 0
1870, April 13.	" " " "	..	..	..	..	100 0
1872, Nov.	" " " "	..	..	..	..	200 0
1873, Jan. 1.	" " " "	..	..	..	..	300 0
1873, May 1.	" " " "	..	..	..	..	138 3

£1,038 3

1868, May 26.	" Bromridge	..	..	..	..	24 0
1868, April 15.	" " "	..	..	..	..	5 0
1870, Sept.	" Postage Circulars to Bromridge	..	..	..	..	60 0
1870, Oct.	" Printing	..	..	..	..	30 0
1872, Oct.	" Cash, Hughes, Collector	..	..	..	..	4 10 0
1872, Aug.	" Petty Expenses, Messrs. Cooper & Hovenden	..	..	..	..	0 18 0
	" Stationery, &c. (Enter)	..	..	..	..	0 7 0
	" Receipt Books (Beck)	..	..	..	..	0 1 0
	" Receipt Stamps, Omnibuses, Stationery, &c.	..	..	..	..	4 12 11

£1,167 12 11

We hereby certify that the annexed Subscription List and Balance Sheet of the "Betts' Defence Fund" have been examined by us, and found correct.

WALTER HART
FREDERICK WARREN SMITH.

NOMENCLATURE.

(SECOND PAPER.)

IN a former article we introduced our readers to the history of some of the titles borne by the *dramatis personæ* of pharmacy, and promised to carry our etymological excavations further, with a view of digging out the roots of a few of the words which form what we may call our stock-in-trade, words, which from the very wear and tear of currency, have ceased to present on their surface any intelligible idea as to the way in which they came to be rationally applied to the objects of which they are now but the mere arbitrary designation. Nor in these attempts at word-analysis, shall we be simply gratifying a taste for the archæological, for, to say nothing of the stigma of ignorance implied in making use of familiar terms and appellations, without other than a parrot-like understanding, no intelligent student can make the least possible progress, whether it be in pharmacy, chemistry, botany, or any other science, unless he is able to appreciate the derivation of words, which, unless their primary signification is known, are utterly incomprehensible and meaningless. For example, we may fancy a student ignorant of even the elements of Greek, attempting to study botany. What sense would he see in *andracium* and *gynacium*, or why should he not be hopelessly confused over *monacious*, *diacious*, and *dichinous* plants? And yet in how many botanical works do the authors take the trouble to even hint at the *rationale* of their language? For ourselves we feel persuaded that if any one—student or otherwise—will take the trouble in some leisure half-hour to hunt up the origin of any of the common words which he is using a dozen times a day, he will be astonished at the world of meaning to be found beneath so familiar an exterior. In his "Lectures on the Study of Words," Archbishop Trench well remarks, in reference to this point, "I am sure that at least for many a young man, his first discovery of the fact that words are living powers, are the vesture, yea, even the body which thoughts weave for themselves, has been like

the dropping of scales from his eyes, like the acquiring of another sense or the introduction into a new world; he is never able to cease wondering at the moral marvels that surround him on every side and ever reveal themselves more and more to his gaze." If this knowledge of word-origin were more general, and the original signification of common terms better known, there would be less fear of our language degenerating from the misapplication of old words, or the introduction of slang new ones. Do not let us be thought purists, nor do we wish to appear sticklers for a classical mode of speech, for in a language like the English, coming from numerous stocks, we must expect to meet with a vast number of hybridous words and others, whose primary meaning will necessarily deteriorate as time goes on. Thus "knave" meant once no more than "lad;" "villain" was "peasant." A "pedant" was simply a "tutor;" "silly" is identical with "selig," blessed; an idiot from *ιδιώτης*, a private person, was used in the English of the seventeenth century to denote one who took no share in public affairs; subsequently it came to signify an ignorant person, and lastly it acquired its present meaning of one deficient in intellect. So also with the verb "to prevent," which from its original sense of "coming before," as it is used in the Prayer Book, has obtained the derived meaning of hindrance or successful opposition. The word "ovation" too has become hopelessly corrupted. An ovation among the Romans was a lesser triumph, in which only a sheep (*ovis*) was sacrificed. We use it to signify a great manifestation of popular applause.

We concluded our last paper with a reference to money, *pecunia*. How many readers would recognise its connection with oxen? And yet the old-world grazier, tired of driving his lazy ox to some distant market where he could barter it for corn or oil, took a piece of leather, scratched upon it the image of his beast (*Pecus*), and called it *Pecunia*, money. The leather has now given place to bank-notes and cheques, often unfortunately as valueless as their leathern prototype.

From the verb *libro*, to weigh, came, of course, *libra*, the Roman weight or *as*, and the French *livre*; in the same way from *pendo*, to cause to hang down, was derived *pondus*, the thing suspended, and to which we give the definition *pound*. *Uncia*, a twelfth part, became Græcized into *οὐγκία*, and anglicized into ounce and inch. There is a Greek verb *δράσσομαι*, which signifies to hold something in the hand, and from this was rather prettily formed *δραχμή*, a small coin or weight. In English we have drachms and drams—the one may be held in the hand, the other too often finds its way into the mouth. Two very different meanings likewise attach to the word "scruple," both, however, referable to its Latin archetype *scrupulus*, a small pebble. Amongst the Romans, as with us, it was used to denote a very small weight, but we also employ the word to express feelings of doubt or hesitation, an idea probably derived from the image of a pebble in the shoe, which, as the pilgrims found out with the peas, is a source of considerable uneasiness. Owing to the unfortunate connection of barley-corns with inches, we get the "grain" weight, from the Latin *granum*, seed, a term, let us hope, the metric system will soon render obsolete.

A curious history is attached to the word "crystal." A Greek word for ice is *κρύος*, a derivative from which is *κρύσταλλος*, which originally also signified ice or frost. But when calc-spar and quartz turned up, these, from their ice-like appearance, were included in the term. Afterwards the ancient philosophers finding ice *κρύσταλλος*, and quartz *κρύσταλλος*, came to the rather unwarrantable conclusion that the two bodies were the same substance, and hence for a long period "crystal" meant ice or snow, so intensely frozen as to have entirely lost all tendency to return to the fluid state. Thus Augustine writes: "Quid est crystallum? Nix est glacio durata per multos annos ita ut a sole vel igno facile dissolvi non potest."

To the Arabic we are indebted for the name of a substance indispensable to the pharmacist, and probably to everyone else but the good templars. The women of the East used to pencil the margin of the eyelids with a powder consisting of antimony (*kohl*) very finely levigated; hence combined with the particle *al*, the term *alcohol* came to be applied to any subtle powder, and, at last, to anything brought to a high degree of tenuity, such as spirit. Had the Arabic ladies been content with Nature's adornments, another and more appropriate name might have been found for the much-

abused liquid. From the same source also comes "alkali." The prefix *al*, denoting essence or totality, and *kali* was the name of a plant from which soda was originally procured. Acid, of course, is of Latin origin; from the root *ac*, sharp, were derived *ac-utus*, something sharp to the touch, and *ac-idus*, something sharp to the taste.

A curious illustration of how the etymology of a word may be lost sight of through contraction and assimilation is seen in "paraffin" formed from *parum affinis*, indicating that when first discovered, the oil was considered to have little affinity with any other substance. So too, in "Jerusalem Artichoke," a species of sun flower, the root of which resembles an artichoke in taste, the term "Jerusalem" being a corruption of the Italian *gira-sole*, or "turn to the sun." The history of the names of most of our medicinal plants is interesting. Belladonna is from *bella donna*, beautiful woman; the juice of its berries being used as a cosmetic by the Italian ladies to make their faces pale. Hyoscyamus is derived from the Greek, *ὕς*, a hog, and *κύαμος*, a bean, so named either because hogs were fond of eating it, or in reference to its hairy appearance resembling swine. Jalap gets its name from Jalapa, a town in Mexico; and rhubarb is a corruption of Rha barbarum, the root from the savage banks of the Rha or Volga. Myrrh is from *μύρον*, ointment, probably from its being a favourite ingredient in the fragrant and costly mixtures with which the well-to-do Easterns anointed their heads. Barosma is appropriately named from *Bap̄s*, heavy, and *ὄσμη*, an odour; and Bistort from *bis torta*, twice twisted, in reference to the form of its root. Ipecacuanha comes from *ipi*, the Peruvian for root, and *cacuanha*, the district from it was first obtained. Mentha has rather a romantic origin. According to Strabo Minthe was a *chère amie* of Pluto, and was metamorphosed by Proserpine into a plant, which afterwards bore her name. A striking instance of strange diversity of taste is seen in the various names by which assafoetida has been known. It was used by the ancients as a condiment under the name of *σίλφιον*, but they thought its flavour so delicious, that it came to be styled *cibus deorum*, food of the gods. The Germans failing to appreciate its gratefulness, and perhaps with the view of expressing their intense disgust at the depraved taste of the Eastern connoisseurs, gave it the not very enticing appellation of *stercus diaboli*, devil's dung. The term assa-fœtida itself is derived from the monks of the Salernian school. Opium is simply from *ὀπ̄ς*, juice, as if it was considered the juice *par excellence*. Cajuput is derived, from the native *kayu-puti*, white wood. Peruvian bark has been known by a great variety of names. In the year 1639, the Countess of Chinchon, wife of the Viceroy of Peru, brought some back to Europe from South America. Its valuable properties were soon appreciated, and in memory of its introducer, it was thenceforth known as Cinchona bark, and its powder was also called Countess' Powder. Soon afterwards the Jesuits, especially Cardinal de Lugo, carried it to Rome, and then, it was known as Jesuits' Bark, Pulvis Cardinalis de Lugo, Pulvis Patrum, etc. Subsequently it was employed in France, by Sir Robert Talbor, and was hence called Talbor's Powder, or "the English remedy." Elaterium is derived from *ἐλαῖνα*, to stimulate, a term applied by the Greeks to any purgative substance, and Hellebore from *ἑλεῖν*, to seize, *βορά*, in eating, in allusion to its drastic properties. A name familiar to many provincial readers is "Hiera Picra," or as the rustics like to have it, "hiccory piccory," the common term for Pulv. Aloes & Canellâ. It has, however, quite a classical origin, being derived from *ἱερ̄ς*, holy, and *πικρ̄ς*, bitter, a proof of the high estimation in which it was once held. We are indebted to the Spanish for sarsaparilla, derived from *zarza*, a bramble, and *parilla* a vine, in reference of course to its appearance. A fragrant medicinal plant we cannot afford to pass by is Nicotiana Tabacum. Its first—shall we say its Christian name—is derived from one Joan Nicot, a physician, who immortalized himself by sending the seeds of the plant to France somewhere about the year 1560. The origin of tabacum is rather cloudy. Enthusiastic Americans refer it to *tabac*, an instrument which was long ago used in America for smoking; others, with a considerable show of reason, state that it is derived from Tobago or Tobasco in the West Indies, whence tobacco was first exported. Many substances in this manner receive their names from particular districts or places. Thus, "currants" from Corinth

"indigo," from India, the "turquoise" from Turkey, and "gamboge" from Cambodia. England now sends her muslins and calicoes to the East, but the words themselves are evidence that we once imported them from thence, for "calico" is from Calicut, and "muslin" from Moussul, a city in Asiatic Turkey. Asia and the hot weather remind us of cholera, the etymology of which is somewhat disputed. Some derive it from *χολή*, bile, and *ρέω*, to flow; others from *χολὰς*, an intestine, and *ρέω*, to flow. Whilst others again refer it by metonymy to *χολέρα*, a water-trough.

Delirium from the Latin *de* and *lira*, a furrow, means literally to slip out of the furrow. Shingles is probably a corruption of *cingulum*, a girdle, in allusion to the mode in which it makes its appearance. Influenza comes from the Italian, *influence*, probably of a peculiar state of the atmosphere, eczema from *ἐκζέω*, to boil out, indicating that which is thrown out by the heat of the blood. Erysipelas may be either formed from *ἐρίω* to draw, and *πέλας*, adjoining, in reference to its spreading propensity, or simply from *ἐρυθρός*, red. Formerly it was known as St. Anthony's fire, either from its burning heat, or because St. Anthony was supposed to cure it. There is room for speculation as to the association of scrofula with *scrofa*, a sow. The Greeks termed it *χοιρὰς*, the diminutive of *χοῖρος*, a sow, and Dr. Forbes thinks the name was suggested by the fancied resemblance of the rounded, conglomerated swellings of the submaxillary glands to a litter of young pigs huddled together. This idea seems to gain support from the fact that the Greeks did in reality give the name *χοιρὰς*, a young pig, to small rocks, just rising out of the sea, and resembling a pig's back. The French call the disease *ecrouelles*, which the Scotch have interpreted as "*the cruels*." This last is an instance of the havoc we are apt to play with French words when we venture to introduce them into common use. There does not seem anything Gallic connected with the word "*kickshaw*," but it is barbarized from *quelques choses*, and was formerly written *kickshose* before its origin was quite ignored. At first sight we cannot trace much resemblance between the word *chest*, as used to designate a wooden box, and as applied to the human *thorax*. When, however, we come to look into the history of the word, we can easily imagine how it came to be applied to two such different objects. Its Latin original is *cista*, a box, itself derived from the Greek *κίστη*, which may mean either a *box* or a *wicker basket*, and no one who has seen a human skeleton, but will appreciate the application of the word in its second signification. May we not instance this as a proof of the assertion made at the commencement of this paper that the investigation of the origin and application of our commonest terms will amply repay the student for his trouble? In a vast number of words the idea originally conveyed has been entirely lost, but by hunting out their etymology we at once see their aptitude, and discover in many instances the rare beauty of the thought which they convey. Look at the word "*desultory*"—not very expressive at first sight, is it? but pull it to pieces, and we find it composed of *de* and *salto*, to leap from one thing to another—like the "*desultor*" in the circus. With this idea in our mind, we use the word to designate a man constantly roving from one thing to another—rambling and inconstant; or again what do we mean by the word "*caprice*?" Those who have ever taken the trouble to watch a goat (*capra*), will not easily forget its extraordinary freaks in the way of exercise. First it bounds forward, then backwards, then it tries a side course, or shoots up straight into the air. To express similar unaccountable fancies in creatures who are not goats, we use this word "*caprice*," and surely the idea presented is picturesque. The word "*bigotry*," too, has an interesting origin. It comes from the Spanish *bigotes*, whiskers, and a man of *bigotes* was one exact in adhering to the fashions, a martinet; thence it came to be applied to an over-scrupulous person, and finally to an obstinate devotion to one's own views. Speaking of bigot reminds us of heretic. We wonder whether ninety-nine persons out of a hundred, who think of heresy with a shudder, have any idea of the actual meaning of the word. It is derived from the verb *αἵτέω*, to choose, and a "*heretic*" is simply a man who prefers to think for himself, rather than let other people do so for him. Rather an honourable individual in our opinion, although he is generally classed with Turks, Jews, and infidels.

But these investigations lead us beyond our limits. We trust, however, that we have said enough to convince some readers of the recreative interest which attaches to the pursuit of a thought through its various word-crystals, up to the original idea of the poet, for such he was, who first gave a name to a thing.

"For words are things—and a small drop of ink
Falling like dew upon a thought, produces
That which makes thousands, and perhaps millions think."

Medical Gleanings.

THE following is the list showing the disposal of the sum collected in London on Hospital Sunday. It is universally acknowledged that the committee have made their award with an almost perfect discretion. It will be observed that the three great endowments, Bartholomew's, Guy's, and St. Thomas' are omitted entirely:—Belgrave, for Children, £162 18s. 4d.; British, £47 18s. 4d.; Bromley Cottage, £38 6s. 8d.; Charing-cross, £958 6s. 8d.; Cancer, Brompton, £259 11s. 8d.; City of London Lying-in, £76 13s. 4d.; St. Peter's, £38 6s. 8d.; City Orthopædic, £38 6s. 8d.; City of London, for Chest Diseases, £958 6s. 8d.; Dental, £38 6s. 8d.; East London, for Children, £306 13s. 4d.; Evelina, £287 10s.; French, £38 6s. 8d.; German, £287 10s.; Great Northern, £383 6s. 8d.; General Lying-in, York-road, £95 16s. 8d.; St. John and St. Elizabeth, £115; for Diseases of the Throat, £191 13s. 4d.; for Skin Diseases, Blackfriars, £115; for Women and Children, £19 3s. 4d.; for Sick Children, Ormond-street, £575; London, £3,833 6s. 8d.; Homœopathic, £239 11s. 8d.; University College, £1,150; North-Eastern, for Children, £95 16s. 8d.; North London Consumption, £383 6s. 8d.; Queen Charlotte's Lying-in, £191 13s. 4d.; Orthopædic, £191 13s. 4d.; South London Ophthalmic, £76 13s. 4d.; for Diseases of the Chest, £383 6s. 8d.; for Consumption, Ventnor, £95 16s. 8d.; Middlesex, £2,300; Seamen's, £766 13s. 4d.; St. Mary's, £1,150; Samaritan Free, £287 10s.; St. George's, £2,875; Convalescent, Seaford and Newhaven, £76 13s. 4d.; Victoria, for Children, £95 16s. 8d.; West London, £287 10s.; Westminster, £1,150; Wimbledon-cottage, £28 15s.; Royal London Ophthalmic, £383 6s. 9d.; Royal Free, £766 13s. 4d.; Metropolitan Free, £95 16s. 8d.; Poplar, £383 6s. 8d.; National, £383 6s. 8d.; St. Mark's, for Fistula, £287 10s.; British Lying-in, £38 6s. 8d.; Male Lock, £95 16s. 8d.; King's College, £1,150; Women's, Soho-square, £143 15s.; Female Lock, £95 16s. 8d.; Western Ophthalmic, £57 10s.; for Hip Diseases in Childhood, £19 3s. 4d.

An American medical journal in reproducing the paragraph which appeared in our columns last month respecting Mr. Holloway's magnificent gifts, introduces it with the graceful remark that "Holloway of London, the patent pill and ointment man, is devoting a portion of his ill-gotten gains to a good purpose, one of the best that can be devised." We could tell with our eyes shut that it was a medical writer who composed that sweet sentence.

A humorous "doctor's story" is quoted from the *Maine Farmer* by the *British Medical Journal*, a part of which we present to our readers. The author is W. M. Carleton. He says:—

Mrs. Rogers lay in her bed,
Bandaged and blistered from foot to head.
Bandaged and blistered from head to toe,
Mrs. Rogers was very low.
Bottle and saucer, spoon and cup,
On the table stood bravely up;
Physic of high and low degree;
Calomel, catnip, boneset tea;—
Everything a body could bear,
Excepting light and water and air.

I opened the blinds; the day was bright,
And God gave Mrs. Rogers some light.
I opened the window; the day was fair,
And God gave Mrs. Rogers some air.
Bottles and blisters, powders and pills,
Catnip, boneset, syrups and squills;
Drugs and medicines, high and low,
I threw them as far as I could throw.
"What are you doing?" my patient cried;
"Frightening Death," I coolly replied.
"You are crazy!" a visitor said;
I flung a bottle at her head.

Deacon Rogers ho came to me :
 " Wife is a-comin' around," said he.
 " I re'ly think sho will worry through ;
 She scolds me just as sho used to do.
 " All the people have poohed and shurred—
 All tho neighbours have had their word ;
 'Twas botter to perish," some of 'em say,
 'Thau be cured in such an irregular way.'
 " Your wife," said I, " had God's good care,
 And His remedies—light and water and air.
 All the doctors, beyond a doubt,
 Couldn't have cured Mrs. Rogers without."
 The deacon smiled, and bowed his head ;
 " Then your bill is nothing," he said.
 " God's be the glory, as you say,
 God bless you, doctor ! good day ! good day !"
 If ever I doctor that woman again,
 I'll give her medicines made by men.

A medical writer tells the following little story of the great French surgeon Nélaton. Speaking of a visit to one of the Paris hospitals, he says:—"As we passed into the hall we heard groans, evidently of a child in great pain. The door leading to the sick ward was ajar, and as we approached we heard the voice of a man talking earnestly with a little sufferer. There was something very affecting in the imploring tones of the child's voice and the tender and sympathising replies of the physician, and it seemed to us no breach of etiquette to witness unseen through the crack of the half open door the scene that was passing within. On a narrow pallet near the window lay a fine boy, nine or ten years old, dying of cancer developing itself between the eyes and behind the nose. It had not shown itself externally, but had destroyed the sight, and was attended by excruciating suffering. By his side sat a stately white haired man holding with one hand the two of the little patient, while with the other he caressingly smoothed his hair. The child told the story of his pain. '*Ah je souffre tant !*' to which the old man listened patiently, promising to devise some relief. Then he rose to go, but first bent over the boy, and with tears dropping from his eyes, kissed his forehead as lovingly as a mother. The white haired man was the world renowned Nélaton—Nélaton lately summoned to attend the fallen Emperor."

PHARMACEUTICAL COUNCIL.

AT the last meeting of the Council (August 6th), the first subject to come under discussion was the contention provoked by Mr. Simon, in consequence of his determined opposition to the appointment of Mr. Haselden as an examiner, a circumstance to which we referred in our last issue. The result of the correspondence has been that the ex-president has had to relinquish his seat at the Board. Mr. Hills then said that he had much pleasure in presenting the Society with another Russian Bond for £100, the interest of which was to be applied to giving a prize of books to each candidate who passed the Minor examination first in honours at the ordinary examinations in Edinburgh, an act of munificence which received the well-deserved thanks of the Council. After adopting the reports of the Benevolent Fund and the Parliamentary Committee, some discussion ensued on that of the House Committee, which consisted chiefly of estimates for repairing and painting the Society's premises. An item of £100 for opening three sham windows in the library was objected to by Messrs. Mackay, Savage, Sandford, and Schacht, but the will of the majority prevailed; Mr. Betty asking how they would like to see a notice affixed to the last plate-glass window in Great Russell-street to the following effect:—

"Beyond this panery refused to go,
 They glazed the rest, but here they stuck stucco."

A question then arose as to reporting the proceedings of the Conference in the *Pharmaceutical Journal*, the President proposing a vote of ten guineas for the purpose. Mr. Greenish did not understand why the expense should be so great, and Mr. Schacht was quite sure the Conference itself had no ten guineas to spare for the purpose. Ultimately the resolution was carried. The Library, Museum, and Laboratory Committee then handed in its statement of the proceedings which had taken place at various meetings with reference

to the future arrangements for the Society's Educational Department, and presented a new prospectus or syllabus of the school, prefaced by an official letter signed by the Secretary. The President having invited an expression of opinion from the other members of the Council,

Mr. WILLIAMS said it might save time to first state the position in which matters stood. As would be gathered from the report of the committee, the acceptance of the document now produced was not at all unanimous on the part of the committee. In fact a great deal of discussion had taken place whether it should be published at all, and only a kind of compromise was it agreed that it should be recommended to the Council to be published with the authority of the Society, but for this year only, the publication not to be taken as a precedent. He thought, therefore, it would be well for the Council in the first place to decide whether they would publish such a prospectus at all in the name of the Society, especially as the committee were not unanimous upon the matter. Of course the wish of all the parties was that they should retain the power of promoting a scheme of education for the purpose of advancing the science of pharmacy in its higher and better sense, not merely a system of instruction which would probably produce the best commercial results; because it was obvious that what might pass as the professors best would be simply to pass as many young men as possible through the school in such a way as to pass the examinations of the Society. The Council, however, would, he thought, agree that that was not at all desirable, the end to be aimed at being rather a high standard of education than success in passing students through their examinations. He did not for one moment suggest that the professors did not agree in that view of the object of the school, but the question was whether sufficient guarantee had been taken to insure the supremacy of that idea. It rather appeared to him that the publication under the authority of the Council of such a syllabus as the one before them would tend to attract young men to the school with the idea of passing their examinations rather than the purpose of obtaining real scientific knowledge. That was why it was opposed by some members of the committee who did not consider such a course consistent with the honour and position of the Society. As now presented, however, the prospectus was much improved to what it was when it first came before the committee, and he did not see any objections to it now that he did at first. Appended to the prospectus, however, there was a list of names of all those who had gained prizes in connection with the school. He did not think it at all desirable to publish such a list, seeing that it would induce other parties to publish similar lists in rivalry, and thus a complexion would be given to the matter which was not at all desirable. There were one or two other points which would have to be discussed, namely, whether a library and reading-room should be open to all students attending the classes whether connected with the Society or not; but he thought the first thing to be decided was whether any prospectus at all should be published.

Mr. MACKAY agreed with what Mr. Williams had stated and thought that as the Council had inaugurated a sweeping change in the conduct of the school, it was only fair to themselves, to the Society, and to the professors, to issue such a prospectus at the commencement of the new experiment. He should therefore move—

"That a circular, containing a general description of the School of Pharmacy be issued to pharmaceutical chemists and chemists and druggists generally throughout the country by authority of the Council, and at the expense of the Society, prior to the opening of the ensuing session."

This having been seconded by Mr. Savage, a question arose as to whether the letter which accompanied the prospectus should be included in the circular. After considerable discussion, in which Messrs. Schacht and Williams strongly opposed the publication of the letter, a compromise was effected by the Vice-President and Mr. Betty being requested to retire and construct an amendment. On their return the letter, as amended, was approved, and a resolution passed authorizing its circulation, together with the prospectus. Mr. Urwick then raised a question as to whether all students should be eligible to compete for prizes—although not connected with the Society as associates or students. After some conversation subject the dropped. A long discussion

next ensued, with regard to the proposed regulation that the library, museum, and reading-room of the Society would be open to all students in the School of Pharmacy. Mr. Williams objected to the clause, thinking it to be no more than right that those wishing to avail themselves of the privileges of the Society should pay a small fee of 10s. 6d. per annum, or otherwise the Society would lose £500 a year—a statement to which Mr. Mackay demurred. Mr. Betty thought the subject a most important one, as if some inducement were not held out to young men to join the Society the position of the Society would be endangered. Whilst, however, objecting to give the students the right to the advantages of the Society, he was quite willing to afford them the facility as a matter of courtesy. After some remarks by Messrs. Mackay and Robbins, Mr. Hampson advocated a liberal policy in the matter, an opinion in which Mr. Greenish also agreed. After some further conversation it was unanimously decided to pass the regulation in the following form:—

“The library, reading-room, and museum of the Pharmaceutical Society of Great Britain are open to all students connected with the Society. Other students may obtain orders for admission thereto by application to the Secretary.”



[The following list has been compiled expressly for the CHEMIST AND DRUGGIST by L. de Fontaineauveau & Co., Patent Agents, 4, South-st., Finsbury, London; 10, Rue de la Fidélité, Paris; and 33, Rue des Minimes, Brussels.]

Provisional Protection for six months has been granted for the following:—

- 2093. S. J. Ditchfield, coal fitter; G. Watson, oil manufacturer; and J. Childs, engineer, all of Scabam Harbour, Durham. Improvements in the construction of heating apparatus, and in the application of hydrocarbon or other volatile oils or spirits for heating purposes and generating steam. Dated 13th June, 1873.
- 2103. D. G. Fitzgerald, of Loughborough-road North, electrician, and B. C. Molloy, of Elm-court, Temple, barrister-at-law. Improvements in the construction and working of electric batteries. Dated 13th June, 1873.
- 2102. D. G. Fitzgerald, of Loughborough-road, North, electrician, and B. C. Molloy, of Elm-court, Temple, barrister-at-law. Improvements in the production of chromic acid, compounds containing chromic acid, and certain other compounds of chromium. Dated 13th June, 1873.
- 2114. E. C. Hamilton, of Camphouse, Colchester. Improvements in the manufacture of manure. Dated 14th June, 1873.
- 2116. T. Murphy, of Connell, Tipperary, Ireland, engineer. Improvements in machinery for cutting or forming cork, wood, bark, and such like materials, into stoppers for bottles and other vessels, or into articles of similar character. Dated 20th June, 1873.
- 2236. A. R. Arrott, of Saint Helen's, Lancaster, chemist. Improvements in the manufacture of soda and chlorine. Dated 27th June, 1873.
- 2239. E. H. Hale, of Brockley, Kent. An improved bottle wrapper. Dated 27th June, 1873.
- 2240. W. Betts, of Wharf-road, City-road, capsule manufacturer. Improvements in stoppering and capsuling bottles. Dated 27th June, 1873.
- 2242. R. A. Gooding, of Manchester. Improvements in the mode of securing corks in bottles containing fluids under pressure. Dated 28th June, 1873.
- 2257. G. Haseltine, of London. Improvements in inhaling apparatus. Dated 28th June, 1873.
- 2312. W. J. Schlesinger, of Finsbury-street, merchant. An improved tap for drawing champagne, lemonade, and other liquids from their bottles. Dated 3rd July, 1873.
- 2344. W. Blundell, of Guildford-street, Russell-square. Improvements in apparatus for irrigating, sponging, syringing, and administering injections and douches to the human or animal body. Dated 7th July, 1873.
- 2351. J. B. H. Howarth, of Salford, Lancaster, engineer. Improvements in the treatment of natural phosphates for the purpose of obtaining what are commonly called artificial manures or fertilizers, and in apparatus connected therewith. Dated 8th July, 1873.

Letters Patent have been issued for the following:—

- 42. W. G. Thompson, of Manchester, manufacturing chemist. An improved process and apparatus for extracting oleaginous or fatty matters from liquid or solid substances. Dated 3rd Jan., 1873.

- 214. J. Cox, of Newcastle-on-Tyne, Northumberland, analytical chemist, and S. Cox, of Hatcham-road, Surrey, hydraulic engineer. An improved process and apparatus for extracting and recovering oils, fats, and similar substances. Dated 18th January, 1873.
- 405. J. H. Johnson, of London. Improvements in the treatment of essential oils with a view to their employment as fuel for heating purposes. Dated 3rd February, 1873.
- 515. J. Broad, of Hornsey-rd., Islington. An improved case or bag for applying poultice: to other external applications to various parts of the human body. Dated 12th February, 1873.
- 1139. T. McDonald, of Kingston-upon-Hull, York, seed crusher. Improvements in wrappers or envelopes for seed crushing. Dated 27th March, 1873.
- 1641. G. Haseltine, of London. An improved process and apparatus for effecting and maintaining a separation between two dissimilar liquids, or between a liquid and any substance held in solution or suspension therein, parts of which invention are applicable to the construction of galvanic batteries, and to the refining of spirituous and vinous liquors. Dated 7th May, 1873.
- 1689. C. Caspers, of Newcastle-on-Tyne, Northumberland. Improvements in the purifying of crude anthracene of commerce. Dated 9th May, 1873.
- 1701. W. R. Maguire, of Dawson-street, Dublin, Ireland. An improved water-filter. Dated 10th May, 1873.

Specifications published during the month:—

Postage 1d. each extra.

1872.

- 3221. W. Darlow. Portable magneto apparatus. 6d.
- 3261. J. A. Wanklyn. Production of oxygen gas. 8d.
- 3322. W. Marriott. Manufacture of salts and oxides of lead. 10d.
- 3460. A. Morgan. Purifying and amalgamating gum resins. 4d.
- 3501. J. H. Player. Phosphorus, &c. 4d.
- 3533. J. R. Belford. Manuring, disinfecting, and deodorizing compound. 4d.
- 3552. F. M. Lyte. Manufacture of acetate of alumina, &c. 4d.
- 3585. F. M. Lyte. Treating and purifying crude phosphoric acid, &c. 6d.
- 3587. W. Betts. Capsule. 10d.
- 3591. H. J. F. H. Foveaux. Clinical thermometer. 4d.
- 3600. P. W. Seymour. Magnetic therapeutic plasters. 4d.
- 3672. A. S. Owen. Obtaining electric currents. 4d.
- 3687. R. S. Best. Manufacturer of phosphates of soda and potash, &c. 4d.
- 786 (1873). W. Grigg. Applying electricity for curing diseases in hors and cattle. 8d.

COBRA POISON has been analyzed and found to consist of carbon, .46; nitrogen, .13; oxygen, .325; sulphur, .025; the rest of hydrogen; this, as M. Dumas remarks, is exactly the composition of beer-yeast, and supports the idea that the cobra poison is of the nature of an animal ferment.

AN EXPLOSION of a mixture of chlorate of potassium and tannin occurred, April 6th, in Philadelphia, by which the dispenser was severely injured in the face and on the hands.

THE SALE OF CARBOLIC ACID.—It is very important that the utmost precaution should be taken with carbolic acid, which, mainly on account of its great value as a disinfectant, has lately become a very frequent cause of death. A nurse in the Taunton Hospital a few weeks ago administered three tablespoonfuls of carbolic acid to a patient instead of the proper medicine, though the bottles were properly labelled. The poor woman died in a few minutes. Another sad case is reported from Aylesbury. A young man named Thomas Keen, aged 22, finding a bottle of carbolic acid on the mantel-shelf of an inn took some of it for a lark and died very soon after. The acid had been bought from Mr. Turner, chemist, and though that gentleman stated at the inquest that he frequently labelled it “poison,” he maintained that by law he was not required to do so. The Coroner, with the Act before him, seemed utterly unable to comprehend it. He said: The Act says it shall be unlawful to sell any poison, either by wholesale or retail, unless the box, bottle, vessel, wrapper, or cover in which such poison is contained be distinctly labelled with the name of the article, and with the word “Poison,” and the name and address of the seller of the poison. The words in the Act are very wide. Mr. Turner pointed out that the schedules of the Act specify what are poisons; to which the coroner made the following incomprehensible rejoinder:—But the Act says “or may hereafter be added thereto.” My opinion, from a legal point of view, decidedly is, that it is absolutely unlawful to sell any poison, no matter whether mentioned in the schedule or not, without labelling it. Ultimately the jury returned a verdict of death from misadventure, coupled with an expression of regret that poisons of this kind should be sold without the word ‘Poison’ being written upon the bottles which contain them.” It was generally understood that this verdict did not reflect in any special manner on Mr. Turner, who had only complied with the custom of the trade.



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Subscribers are requested to observe that the receipt of THE CHEMIST AND DRUGGIST in a Green Wrapper indicates that with that number the term of subscription has expired, and that no further numbers will be sent until the same has been renewed. We issue the notice very respectfully, not that we distrust our Subscribers, but simply because we find it impossible to keep an immense subscription list like that we now have, extending to almost every town in the world, in order without an exact system like this.

FOREIGN AGENTS.

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AUCKLAND	" Kempthorne, Prosser, and Co.
BOSTON, U.S.	" Office of "Boston Journal of Chemistry."
CALCUTTA.....	" Bathgate and Co.
CHICAGO	" W. A. Weed and Co.
CUNEDIN	" Kempthorne, Prosser, and Co.
MELBOURNE.....	" Felton, Grimwade, and Co.
MONTREAL	" Evans, Mercer, and Co.
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J. ALFRED WANKLYN, M.R.C.S., London,
Formerly Professor of Chemistry in the London Institution;
Joint Author of a Book on Water Analysis, and of the
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WE beg to inform our foreign subscribers that the partially unstitched condition in which they receive this journal is in accordance with a regulation of the English Post-office. In common with our contemporaries, to all of whom the same law applies, we are totally ignorant of the purpose of this vexatious rule. We have in vain protested privately against a regulation which compels us to appear before our readers somewhat untidily; and now we feel it due to ourselves to make this public explanation.

BRADFORD.

BRITISH PHARMACEUTICAL CONFERENCE MEETING,
SEPTEMBER 15, 1873.

G LADLY we welcome the advent of another anniversary of this joyous gathering devoted to the promotion of good fellowship and to the development of a love for original research. Sterling good has already been effected by the agency of the Conference, nor will it be the least of our grateful recollections that the creation of this social and scientific organization was in large measure due to the energy of the North. Bradford this year offers her hospitality, and invites us, besides pharmacy, to explore the mysteries of the worsted trade. Much, certainly, we who are amongst the uninitiated, may learn—for as yet we are profoundly in the dark what may be the meaning of calimancoes, shalloons, and tammies. It has been nevertheless our fortune to have been rendered familiar by experience with the open-handed kindness of our brethren in Yorkshire. Let us then, in a brief preliminary notice, say something about contemplated and fixed arrangements. Bradford is not a seat of high professional pharmacy, though it includes some admirable pharmacists amongst its representatives. Therefore it may be expected that the interests of what is termed country trade will be prominently presented to the visitor. If we are correctly informed we may look to meet the druggist as well as the chemist on this occasion. Nothing could prove of more essential service or convey more instruction to the London pharmacist than such an interview. Dr. R. Parkinson (Harrison and Parkinson), 8, Sun-bridge, Bradford, is the Local Secretary; Local Vice-President, Mr. F. M. Rimmington, Ivegate, Bradford; Messrs. Francis Bell, 36, Tyrrell-street, and Mr. Michael

Rogerson, are on the Executive Committee. The invitation was sent in July, 1872, and judging from the names given, it may confidently be expected that every endeavour will be made to promote the success of the meeting, and secure the comfort of the guests. A general reception-room will be open for members of the Conference at the Instituto on Monday, Tuesday, and Wednesday, the 15th, 16th, and 17th of September. The programme includes a dinner open to all members on payment of 7s. 6d. each. This will take place on Tuesday evening, at 7.30 o'clock, at the Victoria Hotel. Great discussion has arisen respecting these Conference banquets, the results of which have not been satisfactory. The thought has also presented itself to the executive authorities that their continuance might in some instances become a burden. The matter has been deemed of sufficient importance to evoke comment in the Year Book, and following strong expressions of opinion, Bradford has (and we think wisely) determined to inaugurate a new system. Favoured tickets of admission will be discarded, and all will be placed on an equal footing.

Earnestly we suggest that London and country members may be intermingled at the social board, and thus become pleasantly acquainted with each other.

With equal earnestness we would advise that those who are known to be associated as well in person as in work should be widely distributed by the directors of the entertainment; there should be few *strangers* in the room when the last toast has been acknowledged and the last "good night" been said.

Bradford may be reached from any station on the Great Northern, Midland, and Lancashire and Yorkshire systems; by London and North-Western, either *via* Leeds, or by joining the Lancashire and Yorkshire at Mirfield; from the North-Eastern districts it will be best to go through Leeds. Hotel and lodging accommodation is limited, particularly on account of the visit of the British Association; early application must be therefore made to the local secretary.

There are four daily newspapers which will contain reports of the proceedings. The *Bradford Observer* (which, it is expected, will furnish the fullest statement), *Bradford Chronicle*, *Bradford Daily Telegraph*, and *Bradford Evening Mail*.

Mr. Thomas Brear, of 17, Kirkgate, has published an excellent illustrated handbook, price one shilling, which our metropolitan readers may procure at Simpkin and Marshall's; it is remarkably well done, and includes a mass of information and statistics which will be invaluable for conversation and after dinner speeches. A pamphlet, descriptive of the staple trade, is also in active preparation, intended to be circulated amongst the visitors of the British Association.

Bradford is the centre of a cluster of towns, all engaged in the manufacture of various woollen fabrics, and the town itself is the seat of the stuff trade. Its remarkable prosperity is of recent date, steam being the agent that has worked a revolution in its commerce. Not very long ago it was as noted for the picturesque character of its site as it is now conspicuous by its giant mills and aspiring chimneys. A French proverb tells us "*il faut souffrir pour être belle*;" rather in England we would say, "we must suffer to become rich." The wooded slopes and sylvan shades have disappeared to make way for the shop and warehouse, while handsome streets have replaced their tortuous predecessors, and palatial residences adorn a town "whose merchants are princes." Warmed by the sunshine of commercial prosperity, Bradford can now boast a population of upwards of 156,000 inhabitants. As regards the value of its staple trade, the wool clipped in the year 1872, according to the figures quoted by Brear, amounted to 155,722,666 lbs. The annual

turn-over in English and colonial wool, cotton, worsted stuffs, and yarns, is £60,926,460.

It was a good thing therefore that the apparition appeared to the Earl of Newcastle when leading the Royalist troops, and exclaimed "Spare poor Bradford!" Since then it has emerged from its sufferings—two hundred worsted mills are found at work, Orleans and Coburgs being the chief produce; its alpaca and mohair goods have gained historical celebrity, while Mr. S. C. Lister has added the new industry of silk and velvet at his gigantic factories in Manningham.

We are indebted to the courtesy of the local executive for a list of places of interest in and around Bradford, which we have taken the liberty to extend with comments of our own.

The Mechanic's Institute, Bridge-street—in which is a valuable and interesting art and industrial exhibition, free to members from a distance. Were it fitting to occupy these columns with art criticism, we would willingly draw attention to a collection to which the title of "art treasures" may most conscientiously be applied. It is the habit of the finest works of the Royal Academy to travel northward; and several noted specimens of the three Linnels, Turner, Frith, Landseer, Faed, Rosa Bonheur, Hook, Prout, and others find here their temporary rest. The Duke of Devonshire, Mr. W. B. Holdsworth, and Mr. Angus Holden are amongst the chief contributors, whilst scarcely a private gallery of the district has withheld its stores.

St. George's Hall, Bridge-street—in which are held concerts and public meetings. Here the late Bishop Wilberforce, then in the zenith of his eloquence, but not of his popularity, underwent the novel experience of addressing a tumultuous and unsympathizing audience. The orator was hissed and hooted, and began his speech in behalf of the Propagation of the Gospel, with the memorable sentence, "Nasty voices from nasty mouths." Not only is there a tide in the affairs of men, but lights and shadows flit over the most rejoicing stream. The Hall has been painted, re-decorated, and lighted in a most tasteful and brilliant manner—the effect (if we may believe report) is something magnificent.

The Town Hall, Market-street, bears some resemblance to a Belgian hotel de ville. The bell tower above the clock is after that of the Campanile Vecchio at Florence. The Infirmary, Westgate and Lumb-lane; The Eye and Ear Hospital, Hallfield-road, The Free Library, Tyrrell-street, contains at present 7,000 volumes, a number that might be extended with advantage, and is scarcely in keeping with the exigences of so vast a centre of activity. News and reading-rooms are attached to the establishment. Peel-park and Lister-park are both public property, thanks to the spirited conduct both of the authorities and the inhabitants. They are about a mile from town, and omnibuses run from the Exchange several times a day.

The Theatre Royal, first called the Alexandra, some may wish to know, is in Manningham-lane, fronting to North Parade. It has a reputation of its own, having been opened by Buckstone, whom our readers may have heard of in connection with the London Haymarket. The two buildings were so constructed that the stage scenery of the one could be adapted with trifling alteration to the other. Let no one forget to visit the old parish church dedicated to St. Peter. It is quite within recollection that it was furnished with a huge three-decked pulpit, a vile flat ceiling, and the usual sleeping boxes of the early Hanoverian age. Of late loftier æsthetics have triumphed; a noble oak roof has been rescued from the hands of the plasterer, and a Flaxman monument is there for such as love sermons

in stones. Before we leave the town let us mention with unfeigned respect its educational advantages. The Grammar School claims first attention, and here we return hearty thanks to Mr. Henry Brown who has thought £6,000 could not be better spent than in founding scholarships. At the Mechanics' Institute there are nearly 1,000 pupils on the class books. Briefly indeed must we enumerate the attractions of the neighbourhood. Low Moor Iron Works, three miles by rail; Bowling Iron Works, one mile from the town; Saltaire, four miles by rail from the Midland station, a town built by Sir Titus Salt, Bart., for the residence of his workpeople, of whom upwards of 4,000 are employed at the mills. The factory is chiefly devoted to the alpaca manufacture. Drink, that darkest of all human curses, is rigidly excluded. Bolton Abbey and Grounds. Fountains Abbey and Stedley Royal, the seat of the Marquis of Ripon. Ilkley, fourteen miles distant, with its splendid hydropathic establishment, called Ben Rhydding. Last, though not least in interest, the moorland village of Haworth, consecrated by the genius of the Brontë family, the gifted sisters whose weird, melancholy history has been revealed by Mrs. Gaskell, and one of whom at least, the authoress of *Jane Eyre*, has won a lasting place in English literature.

Here these remarks must end. The British Association commence their labours on Wednesday, the 17th September. "Dr. Joule having resigned the Presidency, owing to ill-health" (official notice) "the Council have nominated to take his place Professor A. W. Williamson, F.R.S., Professor of Chemistry in University College, London."

The names of the Local Committee of the British Pharmaceutical Conference are as follow:—

BELL, FRANCIS
BLACKBURN, B.
COCKSHOTT, W.
HANDFORTH, E.
HARRISON, T.
HICK, J.
NEWSHOLME, W.
PARKINSON, R.

PRIESTLEY, J.
RIMMINGTON, F. M.
ROGERSON, M.
SILSEN, J.
STANLEY, S. H.
TANKARD, J.
WEST, J.

The future movements of the Conference are uncertain. We are shut out from the enchantments of the Emerald Isle, though our Association guarantees no standing and conveys no qualification. Rumour has whispered that we may be condemned next year to waste the golden month of September in the hot streets and toil-worn pavement of the metropolis. Dreading and deprecating such fate, we anticipate with keener relish the cheery kindness and health-inspiring breezes of the North. Bradford may rest confident of success if faithful to her antecedents. Nowhere shall we receive a more ungrudging welcome; nor can we meet under happier auspices than when trusting to the guidance of our distinguished President. Nowhere shall we be better taught by surrounding actualities the truth of the Bradford armorial motto—"Labor omnia vincit."

An inquest was held on August 9th, at Liverpool, touching the death of Frederick Green, 22 years of age, a chemist, at 22, Wavertree-road. It appeared from the evidence that the deceased had lived alone for some time, but an unfortunate girl has stopped with him occasionally for a week at a time. On Wednesday night the deceased told the woman that he had taken laudanum to make him sleep. He was in the habit of taking morphia, and once said he had taken as much as would kill six men. Early on Thursday morning the girl who stayed with him found him in bed in an insensible condition, and his face dark-coloured. A doctor was called, but he died a few hours afterwards. A *post-mortem* examination proved the deceased to have died from narcotic poisoning. An open verdict was returned.

POLITICS.

AT the close of another year's Parliamentary labours it is suggested by our gracious Sovereign that the results accomplished, "and all mercies of Divine providence," should "find their suitable acknowledgment alike in our words and in our hearts." Such is our trust as well as hers, and we have therefore turned over the pages of Hansard in order to find a few little occasions for thankfulness. We do not pretend to understand the Act which has passed, establishing a Supreme Court of Judicature. But we know that it has been generally unpopular among solicitors and attornies, and therefore we judge it must have some good points. If it provides in any degree a "cheap, certain, expeditious, and effectual administration of justice," as her Majesty seems to anticipate, the session will not have been spent in vain. It is simply marvellous to what an extent this country is not only law-abiding, but worse still, lawyer-abiding. We look at all the strange and costly and ridiculous farces which go by the name of justice, but which only encumber its skirts, and yet no legislator is bold enough or honest enough to sweep away the absurd mass of cobwebs and give us a simple, straightforward means of getting equity. This will continue so long as we remain so fond of sending lawyers to parliament. But let us hope that the Judicature Bill is a step towards a better condition of legal arrangements. If so we will not grudge our thankfulness, even though it must be admitted that this, with the exception of the ordinary routine business, is the one and the only bill of general public interest which the Government has passed.

Every one of the bills specially affecting our readers has been withdrawn. Mr. Norwood's bill, which would render compulsory the registration of all the partners in any firm, was withdrawn on June 24th. This is a very important bill for the commercial community, as it would be a check on the swindling which is often carried on with impunity under assumed titles. We hope to see it introduced again next session. Mr. Attorney-General's Juries Bill fell on July 28th. Our readers would have joined much more heartily in the acknowledgment of sessional mercies if this had got through. The Trade Marks' Registration Bill, which was an ill-considered, unpractical attempt at commercial legislation, was withdrawn on July 7th, and Sir John Lubbock's well-meant but absurd attempt to interfere with retail shop hours, suffered a similar fate on July 10th.

A Government which has held office so long as the present one, particularly if it has exhibited vigorous signs of life, must necessarily irritate large classes of subjects; and these united in nothing else, combine to weaken the power which they judge has injured them. So it comes to pass that a powerful coalition chiefly between the publicans and a section of the Nonconformist body is gradually but surely breaking up the majority which keeps a Liberal ministry in power. Whatever may be the defects of detail which may be found in the two Acts which have given so much offence, we are still of opinion that the nation will in future regard these—the Licensing Act and the Education Act—as two of the grandest achievements of Mr. Gladstone's Administration.

The somewhat startling changes in the Ministry which have recently been announced have afforded food for the daily papers for a day or two, but have been received by the public with an extraordinary listlessness. The weak point in the reconstruction of the Cabinet is undoubtedly the retention of the services of Mr. Lowe and Mr. Ayrton. Those gentlemen have both failed conspicuously to win the approval of the nation, and have so thoroughly alienated the

sympathies even of their friends, that complete resignation of office was obviously their course. The assumption of the duties of Chancellor of Exchequer by Mr. Gladstone is a hopeful but dangerous experiment.

In conclusion, we should like to know why there is no record of a blow struck at those gigantic scandals, the Civil Service Co-operative Stores. Before the session we thought we had some friends at court. They spoke loudly and clearly as to the injustice and meanness of civil servants carrying on big shops, and entering into unequal competition with the tax-paying tradesmen. And we cheered them heartily. Let us remember these gentlemen, and another time reserve our cheers until they shall show us some deeds as well as words; and in the next Parliament, which cannot be very far distant, let us try to get a fair sprinkling of men who will honestly and ably represent commercial interests, to counteract somewhat the soldiers, lawyers, and landed proprietors, who have so long almost monopolised legislative functions.



PROCTOR'S PRACTICAL PHARMACY.*

THE work now under review has only been in our hands a few days, and we confess that we have not yet had the opportunity of making such an examination of it, as its importance to our readers demands. This month, therefore, we shall only introduce the volume, and probably give a more critical notice of it in our next.

The daily avocations of a pharmacist are in some respects tedious and monotonous, but they are not wearisome to anyone fit to be a pharmacist, by reason of the constant demand for some higher labour than that of the hand. In other words, pharmacy is an art, and demands for its successful prosecution just that loving attention which is required from all artists of whatever character. The man who silvers pills with a merely mechanical attention, is not a pharmaceutical artist; and we doubt whether he has any right in the pharmaceutical profession at all. The true artist is one who performs such a task in the same spirit as Izaak Walton fished for trout; one who would hardly complain about having to do it in the middle of the night; one who would strive until he could place the dozen in their box, with a thrill of conscious pride that no one in the country could turn them out more shiny or more round. Such an artist is learning more of the details of his work day by day, and is ever accumulating his stock of pharmaceutical knowledge. Numberless are the special items which a thorough pharmacist must know, and there will still remain much more which he might learn if he could discuss matters fully with his brother craftsmen.

This book of Mr. Proctor's seems to us to be a rich store of practical hints. Every page is valuable reading for a student, or for a practical pharmacist; not so much for the mere items of information which it contains, as for its general educational value—an object which Mr. Proctor has carefully sought to obtain. We say nothing at this moment of the accuracy or otherwise of the author's processes or ideas on pharmaceutical subjects, though we are not likely to find much to object to in these. But we refer especially to the really able manner in which he has presented his subjects—in a way calculated to exercise the reason, and draw out the latent powers of the student. A very good example of this style is presented in the chapter which treats on the reading of prescriptions. Here are presented some thirty or more excellently lithographed *fac-similes* of real prescriptions. The author's comments on these are of such a character as not only to elucidate any difficulties which may occur in the special prescriptions, but also to

tend towards developing in the reader the skill of a hand-writing-expert, which, to a greater or less degree, the dispensing chemist must be.

Mr. Proctor's lectures, which perhaps we ought to explain, have been delivered to the Newcastle College of Medicine Pharmacy Class, treat first of all on the mechanical and chemical processes which are requisite in pharmaceutical practice. These lead up from the simpler to the more complex processes of the Pharmacopœia. Then we have several lectures, more especially referring to dispensing; one each on the qualitative and quantitative testing of the pharmacopœia; and finally, four suggestive lectures on the pharmacology of special drugs, cinchona, opium, aloes, and iron, being those selected.

We must not omit to mention Mr. Proctor's preface, which, though charming for its quiet humour, is too much in the style of Rousseau's "Confessions," to be perfectly at home in a work of this character. We judge the work by its own merits, and fail to see that the "feeble constitution and active business" with which the writer is cursed and blessed, is a justification even for the misplacing of a single comma. But the story of pharmaceutical efforts at Newcastle is very appropriate here; and we learn with much regret from this preface, that notwithstanding exceptional advantages, the number of students has diminished from year to year.

As already intimated, we shall continue our remarks on this important publication.

ASSAYING.*

THE demand in these times for technical exactitude in every department of scientific handicraft is so great that the pressure is felt by everybody. Adulteration Acts compel provision dealers to vie with each other in the purity of their goods, and competition, as well as the enormous interests at stake, compel the merchants, manufacturers, and others, who deal in the mineral wealth of the world to practise an exactitude which tasks our scientific knowledge. When we state that in each of the Cornish laboratories, some 8,000 or 10,000 copper assays are annually made; and again, for instance, that in the Calcutta mint from 80 to 164 silver assays constitute a day's work, the absolute necessity of methods of assaying, combining rigorous exactitude with simplicity of execution becomes obvious. No wonder then that prizes are given for methods which fulfil the requisite conditions, of which a good example is furnished by the following condensed statement of the specified conditions under which a prize of £15 was offered for a method of assaying the Mansfeld copper ores by the directors of the Mansfeld copper mines in Central Germany. Any process was excluded which took up too much time; which involved the use of varying quantities of ore; wherein the use of expensive material, such as chlorate of potassium was involved; wherein violent reactions, inducing explosion, took place; wherein the evaporation with acids was involved; sanitary reasons caused the rejection of processes, involving the use or elimination of sulphuretted hydrogen or sulphurous acid gas; technical reasons imposed several other conditions, while it was a *sine quâ non* that no great amount of scientific training should be required in the operator.

In consequence of the varying requirements of the merchant, manufacturer, and consumer, an immense variety of processes for the estimation of the value of mineral substances have been devised by scientific and practical men. In such a work as a manual of practical assaying, we look for a full exposition of these methods, root and branch; we expect to find some chapters devoted to preliminary matters, to the description of apparatus, and the explanation of general methods, and subsequently we should look for a minute description of special processes, and their respective applicability under different conditions. Accordingly, we find in the work which forms the subject of this notice, that

* "Lectures on Practical Pharmacy." By BARNARD S. PROCTOR. London: Churchill.

* A Manual of Practical Assaying. By JOHN MITCHELL, F.C.S. Fourth Edition. Edited by WILLIAM CROOKES, F.R.S. London: Longmans, Green and Co.

Chapter I. treats of general Chemical Theory in a brief manner; and herein the editor very properly advises the student to acquire a practical knowledge of the laws and manipulations of experimental chemistry, by going through a course of lessons in a laboratory before he grapples with the more difficult problems of practical assaying. Chapters II. to VIII. treat of matters of a more or less general character, being occupied with descriptions of apparatus, general methods, the application of heat, re-agents, and the blow-pipe, and also with a short chapter descriptive of the principles of volumetric and colorimetric analysis. A considerable amount of attention is devoted to the methods of discriminating minerals, and a "scheme" for the determination of minerals is given which requires practical testing to ascertain its value. We are not given to place much reliance on schemes and tables, the student is only too ready to accept the *indications* afforded as mathematical demonstration of the nature of the substance he examines, while he ought, on the other hand, to simply make use of them as guides to a safe conclusion. Chapter IX. to the end treat of Specific Processes.

It would be impossible in a short notice to criticise the several processes to which prominence is given in the pages of this work. We must look upon the book as a whole. And here the first thing that strikes us is that the want of a "key" will be immediately felt by a student, and more particularly by one who wishes to make practical use of the book, and has not much experience to guide him. There is little doubt that few would wade through a manual of practical assaying for study's sake, and there is less doubt that a practical man will not want to wade through it in the midst of his work; the want, therefore, of a means of readily ascertaining the best available process for any given job will be often felt, even with the manual on the book-shelf. In speaking in this way, we are not laying special blame in this instance; our observations are more directed at the encyclopædic tendency of the times, — a tendency which can hardly be avoided in writing a manual of practical assaying, but which becomes objectionable when allowed full swing in the pages of every student's text-book.

Generally speaking, we must confess to a feeling of gratitude to the editor while turning over the pages of his manual. We trace his pen on almost every page, and see signs of total reconstruction in some of the chapters; and we admit that there is evidence of his care in avoiding superfluous or unreliable matter—a care which has done much towards reducing the necessary cumbersome-ness of a practical work on assaying.

TYNDALL'S LECTURES ON LIGHT.*

THESE lectures, a course of six delivered in Boston, New York, Philadelphia, Baltimore and Washington, were published by Dr. Tyndall before quitting New York at the commencement of the present year. An English edition has now been prepared, with such emendations as will enhance the value of the work to readers at home.

Commencing with an exposition of the two great uses of experiment—"A use in discovery and verification and a use in tuition"—the author glances at the scientific notions entertained by the ancients, and traces the progress of astronomy from Hipparchus to Newton.

In the first lecture the laws of incidence and reflection are explained, and the phenomena of refraction, first accurately understood by Willebrod Snell in 1621, described. Newton's celebrated experiment, which first proved solar light to be composite and not simple, is taken as the starting point, from which the lecturer proceeds to demonstrate the theory of colour, as manifested in the ocean, in foliage, and in common pigments.

Then follows a consideration of the physical theories of light, and an exhaustive explanation of the various properties of light waves. In the third chapter the subject of atomic polarity occupies attention, and a full explanation of the cause and effect of double refraction and polarization is given. Those who have only a confused notion of these

phenomena—as described in the involved language of ordinary text books—will be delighted with the perfectly clear manner in which Dr. Tyndall develops his subject. The chromatic phenomena produced by crystals on polarized light are next described, and the discovery of circular polarization by Fresnel recorded. Then follows an explanation of the properties of the ultra-violet rays of the spectrum, and of the beautiful phenomena of fluorescence, which had attracted the attention of Boyle, long before its physical origin was understood. "We have sometimes," says that philosopher, "found in the shops of our druggists a certain wood which is there called *lignum nephriticum* because the inhabitants of the country where it grows are wont to use the infusion of it, made in fair water, against the stone in the kidneys. This wood may afford us an experiment, which, besides the singularity of it, may give no small assistance to an attentive considerer towards the detection of the nature of colours. Take *lignum nephriticum*, and with a knife cut it into thin slices; put about a handful of these slices into two, or three, or four pounds of the purest spring water. Decant this impregnated water into a glass phial; and if you hold it directly between the light and the eye you shall see it wholly tinted with an almost golden colour. But if you hold this phial from the light so that your eye be placed betwixt the window and the phial, the liquid will appear of a deep and lovely ceruleous colour."

From a series of most interesting experiments—described as only Dr. Tyndall can describe—the substantial identity of light and radiant heat is ably demonstrated; and the concluding lecture is devoted to the subject of spectrum analysis.

Having referred in his second lecture to the damaging attacks of the Edinburgh reviewers on the scientific labours of Dr. Young, Professor Tyndall has published in an appendix to the lectures, both the articles of Lord Brougham and the reply of Dr. Young, and they will no doubt be read with much interest. An abstract of a discourse delivered by Mr. William Spottiswood to the members of the Royal Institution, on the spectra of polarized light, is also appended.

The work is amply illustrated throughout with well-executed woodcuts, and a beautiful engraving of the plumes produced by the crystallization of water—photographed by Professor Lockett—forms the frontispiece. We can cordially recommend the book to our readers, as a complete and most interesting collection of the facts and theories connected with the subject of light; especially to students will it be welcome, to many of whom we trust the matchless experiments and fascinating diction of Dr. Tyndall are already well known.

OBITUARY.

On the 5th May, 1873, Mr. William John Wright, Chemist and Druggist, of Hastings.

On the 19th May, 1873, Mr. Henry Blacklock, of Bournemouth, Pharmaceutical Chemist.

On June 24th, at Hampstead-heath, Mr. John Holliday Thomas (of the firm of J. H. Thomas and Son, Pharmaceutical Chemists, Boston, Lincolnshire).

On the 3rd July, at Brighton, Mr. Charles Davy, Pharmaceutical Chemist, aged 76, of the firm of Davy, Yates, and Routledge.

On the 17th July, 1873, of phthisis, Mr. Ernest James Tween Agnew, Pharmaceutical Chemist, of 520, New Oxford-street, London. Aged 27. Mr. Agnew was residing in Paris during the siege, and at that time, and previously, contributed several letters to this journal.

On the 22nd July, 1873, Mr. John Vincent Nunn, Chemist and Druggist, of Bury St. Edmund's.

On the 23rd July, 1873, Mr. Alfred Rook Squire, Pharmaceutical Chemist, of the firm of Barron, Squire, and Co., Bush-lane. Aged 27.

* Six Lectures on Light. Delivered in America in 1872-1873. By John Tyndall, LL.D., F.R.S. London: Longmans, Green, and Co.



THE SPIRIT TRADE.

AN extraordinary case was tried at the Court of Exchequer in June last before Baron Bramwell. The defendant was a Belgian named Carmouche, and the trial was instituted by the Inland Revenue department. The Attorney-General, the Solicitor-General, Mr. Locke, Q.C., and Mr. Pinder, appeared for the Crown; the defendant did not appear.

Carmouche had been engaged in distilling spirit without troubling her Majesty's Excise officers for a licence since November, 1871. Leaving his morals out of the question, he seems to have been a smart sort of gentleman. He had obtained a partner named Reynolds, to whom, no doubt, the hard work was mainly entrusted, and with a second hand still which he had purchased in Brussels he commenced the manufacture of what he found it convenient to call "perfumed spirits." Several firms of high position among wholesale druggists were among his customers; but in an unfortunate moment for himself he solicited an order from Messrs. Battley and Watts. The so-called "perfumed spirit" was offered at 17s. 6d. per gallon; but Mr. Watts at once perceived that there was no difference between that and pure spirit, the market value of which, of similar strength, was at that time 18s. 10d. Mr. Watts ordered a cask, and promptly gave information to the Inland Revenue Department. By his assistance, but not without some scheming, the distillery was traced out, but Mr. Carmouche had fled. The other firms, who with a singular innocence had imagined they had been purchasing perfumed spirits, now also came forward to assist the Excise officers. At the trial they declined to swear that the "perfumed spirit" they had purchased, was exactly what was known in the trade as "perfumed spirit to be used for perfumery," and Baron Bramwell in summing up made some very severe remarks on their conduct, pointedly quoting the old adage, "that the receiver is worse than the thief." Mr. Watts, he added, was to be greatly commended, but he had done no more than his duty as an honest man. The jury found a verdict for the Crown on the forty-six counts of the indictment with treble penalties. The total sum of Mr. Carmouche's indebtedness is 13,687*l.* 5*s.*, which her Majesty's Government may schedule among "bad and doubtful."

THE "CHLORODYNE" DISPUTE. — BROWNE V. FREEMAN.

(Before the Lords Justices of Appeal.—July 23, 1873.)

This was an appeal against a decision of the Lord Chancellor exercising his original jurisdiction in hearing the causes set down before the Master of the Rolls. The bill in this suit was filed by Dr. Collis Browne for an injunction to restrain the defendant, a chemist in the Kennington-road, from advertising, or in any other way representing, that by the decision of Vice-Chancellor Wood, he was entitled to the sole right to use the word "original" as a prefix to chlorodyne. It was the third suit between the parties. The plaintiff began to supply the public with chlorodyne in 1855, having invented it, as he stated, in 1846, and used it with success in his practice in the East. The first bill was filed in May, 1862, to restrain the defendant from using the name of chlorodyne as descriptive of a medicine prepared by plaintiff; but on the defendant putting in an answer, claiming to have discovered his preparation in 1844, and denying that he had ever advertised it except as Freeman's chlorodyne, the plaintiff dismissed his bill. The second bill was filed in December, 1862, to restrain the defendant from advertising his own preparation as "the original chlorodyne, manufactured by the inventor, Richard Freeman." In 1864, Vice-Chancellor Wood dismissed this bill, on the ground that, as far as the name of chlorodyne went, the plaintiff had, by acquiescence in the use of it by other persons, lost the right to treat it as

his own trade mark, and that the defendant had not actually represented that his chlorodyne was of the manufacture of the plaintiff; but as his Honour disapproved the course pursued by the defendant, he dismissed the bill, without costs. There was no appeal from this decision. In January, 1872, the present or third suit was brought in consequence of some advertisements issued by the defendant, one of which was as follows:—

"The original chlorodyne and only genuine, invented by Richard Freeman, pharmacist, entitled by the decision of Vice-Chancellor Sir W. Page Wood, January 11, 1864, to the sole right to use the word 'original' as a prefix to 'chlorodyne,' which decision was confirmed July 12, 1864." The plaintiff also complained of the defendant's representing that the genuine chlorodyne is only sold under the protection of Government authority, with a stamp bearing the words 'Freeman's Original Chlorodyne,' and that without such stamp no chlorodyne is genuine; and that several testimonials to the efficacy of chlorodyne as a remedy for various disorders which were really given in favour of the plaintiff had been appropriated by the defendant and printed on the wrappers of his bottles. The Lord Chancellor thought the matter was virtually concluded by the former suit, and that the defendant's misrepresentation of the effect of Vice-Chancellor Wood's decree gave the plaintiff no right to any relief. His Lordship also thought that no case had been made out as to the testimonials, and the bill was dismissed, with costs. The plaintiff then presented a petition of re-hearing.—Sir R. Bagge, Q.C., and Mr. B. B. Rogers were for the plaintiff; Mr. Southgate, Q.C., and Mr. Stirling were for the defendant.—Lord Justice James said he thought the suit was an entire experiment; it had been instituted without any authority. Probably it might have answered the object of the plaintiff as another advertisement of the superiority of his chlorodyne over any other. It had been long ago settled in this court that the word "chlorodyne" had become the mere name of an article, which it was open to anyone to use. Freeman was as much entitled to say that his was "the original" chlorodyne as was Browne. Freeman always placed his own name upon what was sold by him. It was simply the case of two rivals in trade selling their own manufactures under the same descriptive name. It appeared to their Lordships (though the defendant had not been heard) that the defendant had misrepresented the effect of Vice-Chancellor Wood's judgment. But still this afforded no ground for the interference of the Court; there was no representation that Freeman's manufacture was the same thing as Browne's. If it amounted to anything it was a slander on the plaintiff; but it was not a violation of any trade mark or of any right of property which this Court would interfere to protect. His Lordship thought the decision of the Lord Chancellor was quite right.

Lord Justice Mellish was of the same opinion. He thought the decision of the Lord Chancellor was quite right upon the ground on which he had put it. The advertisements complained of had been first published during the pendency of the former suit, when an application might have been made to the Court by the plaintiff, and the defendant having continued them ever since, it was now much too late for the plaintiff to complain. At the same time his Lordship (the Lord Justice) did not see how the plaintiff could be entitled to any remedy. There could be no right of action at law, for all the advertisements plainly stated that what the defendant sold was manufactured by himself. If an action was maintainable at all, it would be on the ground that there was a slander of title or of the plaintiff as a professional man. But the difficulty was that the advertisements did not allude to the plaintiff at all—the utmost they did was to make a false statement. Puffing advertisements often did this, and they might no doubt prejudice a fair dealer who did not care to go to the expense of issuing such things. But this was no ground for the interference of the Court. In this case both the parties were advertisers, and had done the best they could for themselves in that way. The petition of re-hearing must be dismissed, with costs.

REMARKABLE INQUEST.—A CHEMIST CENSURED FOR BEING TOO CAREFUL.

An inquest was held at Ramsgate, on the 7th inst., on the body of a Mr. J. H. Davidson, an ironmonger of the town, who died under the following circumstances. He had for

some time past suffered from dslirium tremens, and on the 6th inst. his regular medical attendant, Mr. Cresswell, being out of town, a Mr. J. R. Leake, M.R.C.S., was called in. This gentleman gave first a grain of opium and some other medicine, which produced some refreshing sleep. In the evening he called again, and, finding the patient very excited, wrote a prescription for him containing

Tinct. digitalis ʒss.
Aque ʒjss.

which was to be taken as a draught at 10 o'clock. The prescription was taken to Mr. H. A. Fisher, chemist, who refused to dispense it on the ground of the excessive dose. Later on the doctor was again sent for, and gave the patient some morphia, which had no effect, and the latter died early in the morning. Mr. Leake added to his evidence the statement that he had refused his certificate in order to give Mr. Fisher an opportunity of explaining his conduct in the case; considering it also due to the public and to the medical profession generally, and to his own reputation in particular.

In answer to the Coroner, he said he believed the patient would have lived had he taken the medicine prescribed.

Mr. Fisher then asked permission to make a statement, and being sworn, said: The prescription now produced is the one that I had handed to me last night, shortly after nine o'clock. The dose being a very excessive one of digitalis—eight times the dose recognised by Mr. Squire in his *Pharmacopœia*, and the same in the British *Pharmacopœia*—I inquired of the messenger who brought the prescription who it was for. He replied that if I particularly wished to know he would tell me; this he uttered in a most impertinent manner. I told him it was a very strong dose, and was sufficient to kill anybody, and, as he was so very impertinent, I refused to give it, and returned the prescription to him. Had I even known it was for Mr. Davidson I should have refused to give it. In answer to a question, witness said: My reason for so doing was simply that digitalis is a medicine of very uncertain result. I handed the messenger the prescription back again, as I did not like the responsibility of making it. Any medical man wishing to give such a dose as here indicated, ought to wait on a chemist and state the case. The prescription was only signed with the initials of the medical man, and not in his full name. After considerable further discussion, during which it transpired that two other chemists were in court ready to give evidence in support of Mr. Fisher's views, the Coroner summed up. He clearly remarked that a chemist must use his discretion in such a matter, but the jury's verdict was—"That the deceased died from natural causes, accelerated by excessive drinking; and the jury are of opinion that the chemist should have dispensed the prescription of the physician." The following document, referring to this case, has been published in the *Thanet Advertiser*:—

[COPY.]

"Ramsgate, Aug. 8th, 1873.

"We, the undersigned, think Mr. Fisher was quite justified in refusing to make up a draught containing such a very large dose of a poisonous drug without a further communication with the medical man prescribing. The prescription being initialled only.

ROBT. HICKS.

C. RICHARDSON, M.D.

JAMES WEBSTER.

WM. CURLING.

S. WOODMAN.

JOSIAH AUSTEN.

T. A. HENDERSON, M.D.

E. B. WALFORD.

J. B. THOMSON.

ALFRED FRANKS, Chemist.

REUBEN BAILY, "

HENRY MORTON, "

SILAS DANIEL, "

EDWIN BALOH, "

ALFRED KENT, "

ANGELINA'S GOLDEN LOCKS.

Angolina Brown came before one of the London magistrates, last week, and related her sad story. She said that six weeks ago she saw an advertisement in a newspaper to the effect that a well-known firm of hair dyers could in forty-eight hours change the colour of the hair. Having ascertained that the firm had carried on business for a number of years, she, wishing to have her hair (which was then dark brown) turned into a golden colour, sent a letter asking the advertiser if he could do so. He replied in the affirmative. She accordingly went to his place of business and told him what

she required. He said he had some dye that would change her hair to a fine golden colour. He requested to have piece of her hair, so that he might dye it, and he would send it to her by post when it was done, to see if it would suit her. She allowed him to cut off some of her hair, and in the course of a day or two she received, by post, her hair, which had been dyed. She did not fancy it, and sent it back in a letter telling him so, and he then sent her some which was "golden," and she consented to have that colour. She then bought a bottle of dye, for which she paid 5s. 6d., and she was informed that it would turn her hair to the colour she required. She acted according to the instructions, and used the dye for about a week; and then, to her surprise and dismay, she found her hair come from her head in large quantities whenever she combed or brushed it. Her hair, too, instead of being "golden" became sandy. She was afraid she would be bald, and she wished to know what she could do. The magistrate said he could not help the applicant. She had better go and consult a solicitor.

SUNDAY TRADING.

Mr. Miles Doughty, a chemist and druggist in the Blackfriars-road, has been summoned, with a number of his neighbours, at the Southwark Police-court, for carrying on their trades and callings on a Sunday morning. Mr. Burney appeared to prosecute on behalf of the Vestry. Mr. Doughty, in defence, contended that he did not think the Vestry had any authority to act as they had done. He did not keep open unnecessarily. Mr. Benson was of the same opinion, and thought it was for the general and public good that chemists' shops should be open on Sundays. By their doing so they caused no obstruction, annoyance, or desecration of the day. Under these circumstances he dismissed the summons against him. The rest were not quite so fortunate, but the magistrate evinced a decided tendency towards lenient treatment in all the cases.

A PRESCRIBING DRUGGIST.

A commercial traveller named Dell recently summoned a chemist and druggist named Balls, residing in Grange-road, Bermondsey, for holding himself out as a qualified medical practitioner, and for treating the plaintiff with gross want of skill and care. It appeared that the defendant had posted about Bermondsey gigantic placards, inviting persons to come to him and be cured of all their complaints at a cheap rate, and that the plaintiff had, in consequence of seeing one of these bills, been attracted to the defendant's place of business. There he found several people waiting to consult the defendant, and having described his symptoms to him, he received a bottle of medicine, with directions for its use. He went to the defendant's on several subsequent occasions, and had more medicine from him, until he became so seriously ill that he had to take further advice, when it was discovered that he was suffering seriously from the effects of mercury. The medicine with which he had been supplied by the defendant was analysed, and found to contain bichloride of mercury (corrosive sublimate), with other ingredients. At the trial it was stated that the plaintiff had suffered, and would for some time continue to suffer, from mercurial poisoning, the results of the defendant's improper treatment. The defendant denied any recollection of the plaintiff, although it was stated by one of his own witnesses, as well as by the plaintiff himself, that, when he called upon the plaintiff, after this action had been brought, he addressed the latter by name. On cross-examination as to the numerous letters placed after his name, both on his placards and on the labels affixed to his bottles, he explained that M.U.S.C.D.E. (which to the ignorant or unwary, present much the appearance of M.R.C.S.E.), meant Member of the United Society of Chemists and Druggists of England, which was merely a trade benevolent society, and has ceased to exist for some years past, and that M.B.E. (M.B., being of course, a duly registrable medical qualification—Bachelor of Medicine, meant a Medical Botanist of England, this title being one of the defendant's own coinage, as no such society exists. In summing up the evidence, the learned Judge said that there could be no doubt, from the medical evidence that if the defendant did give the medicine produced, he was guilty of the grossest ignorance and carelessness, and that the jury must find a verdict for the plaintiff; it was also clear, from the

defendant's posters, that he held himself out as a medical practitioner, and acted as such. He recommended the jury to give moderate damages, not because the conduct of the defendant was in any way excusable, as his offence was of a most serious character, but because heavy damages would defeat the ends of justice, as the plaintiff would probably never get them. The jury immediately returned a verdict for the plaintiff; damages £25.

FULLWOOD V. FULLWOOD.—COURT OF CHANCERY.

(Before the Lords Justices of Appeal, July 31).

The object of this suit was to restrain the defendant from selling annatto in bottles bearing labels similar to the plaintiff's. The plaintiff, Richard Jackson Fullwood, of 24, Somerset-place, Hoxton, is a manufacturer of annatto, which is a substance largely used by dairymen for colouring cheese and butter. The plaintiff's trade mark was a stag with an olive branch, and his bottles were of different sizes, of a light brown or grey colour, having a red label on one side, and a white label on the other, and having under the trade mark the title, "To Farmers and Dairymen. R. J. Fullwood and Co's. Highly Approved Fluid Extract of Annatto for Colouring Cheese and Butter." The defendant, Henry Fullwood, is a nephew of the plaintiff, and a manufacturer of annatto under the firm of "Henry Fullwood and Co." The plaintiff alleged that the defendant, who had formerly carried on his business at Kingsland, had recently removed to No. 1, Somerset-place, Hoxton, a few doors from the plaintiff's premises, and had adopted labels and bottles similar to his. The defendant's labels bore at the top the device of the royal arms, and the following title:—"For Colouring Cheese and Butter. H. Fullwood and Co.'s Concentrated Liquid Extract of Annatto for Farmers and Dairymen." The plaintiff moved for an injunction, which was granted by Vice-Chancellor Malins. The defendant appealed. It was then arranged that the motion should be turned into a motion for decree to be heard before this Court. The case now came on for hearing. Mr. Higgins, Q.C., and Mr. Robinson, were for the plaintiff; Mr. Glasse, Q.C., and Mr. Mr. T. L. Wilkinson were for the defendant. Their Lordships thought that the defendant had been doing what was calculated to deceive with the intention of deceiving the unwary world into buying his goods for those of the plaintiff. He had been trying to steal his uncle's reputation. Their Lordships entirely agreed with the Vice-Chancellor, and thought that a perpetual injunction should be awarded against the defendant, with costs.

DEATH BY CHLOROPFORM—ACTION FOR DAMAGES.

An unusual case is reported in the Dublin newspapers, whereby a widow, Mrs. Johanna Lambe, sought to recover £1,000 damages from two hospital surgeons, Drs. John Barton and E. H. Barton, on account of the death of her husband, to whom chloroform had been administered at the hospital. The deceased had been brought to Sir Patrick Dun's Hospital on the 13th of February last, with a compound fracture of the great toe. Amputation was considered necessary, and chloroform had been administered. The defence clearly proved that every precaution had been taken, and that death was owing to idiosyncrasy. The jury of course found for the defendants.

William Hollis, chemist and druggist, of Stoke-upon-Trent, has been sentenced to ten years penal servitude at the Stafford assizes for administering to Sarah Cherrington, on December 14, 1872, at Stoke-upon-Trent, a certain noxious drug, with intent to procure abortion.

A sad case of suicide occurred at Stoke-upon-Trent, on the 12th ult. Thomas Albert Ash, 19 years of age, an apprentice to Mr. J. T. Walklate, chemist and druggist, Stoke, was arrested by a police constable on a charge of absconding from the service of his employer. The youth was conveyed to the lock-up at Stoke, and confined in one of the cells on the Friday night. Shortly after mid-day on Saturday, the 12th, it was discovered he had swallowed a quantity of prussic acid, and died in about three minutes after the alarm was raised.

At the Hanley Police-court, on the 1st inst., Mr. Edward Poitevin, mineral water manufacturer, was charged with unlawfully using bottles manufactured for, and bearing the name of, John Williams, also a mineral water manufacturer, residing in Hanley. The charge was proved, and defendant was fined 10s., and ordered to pay full costs.

At the Birmingham Borough Sessions, on the 5th ult., Arnel Green Allen, chemist's assistant, was acquitted of the charge of stealing tea, soap, and other articles, the property of his master, Mr. Holland, chemist and druggist, of Ladywood-road.

The other day in the Chancery Court of Lancashire, Mr. Thomas Martin, chemist, Copperas-hill, Liverpool, obtained an injunction against W. Jones, chemist, Great Howard-street, Liverpool, to restrain him from selling any cholera mixture prepared by him or on his behalf under the name of the "Rev. Mr. Parker's Mixture," or "Priest's Mixture," or any other name similar to that used by the plaintiff for a certain cholera mixture, or any cholera mixture prepared by the defendant with a label similar to that used by the plaintiff.

Some trouble has occurred with assistants lately. On July 15th, at the Penzance Town Hall, William Viner, of London, assistant chemist and druggist, was charged before the mayor, H. C. York, Esq., and J. R. Branwell, Esq., with drunkenness and disorderly conduct. Mr. W. C. Hemmings, of Penzance, chemist, advertised a month since in the CHEMIST AND DRUGGIST for an experienced assistant, to occasionally take charge of the business in his absence. Out of a great many applicants Viner was selected. Forty years of age, with an experience of more than twenty years, having served an apprenticeship with one of the most respectable chemists in the kingdom, and producing what seemed trustworthy testimonials from a Mr. Henry Marshall, of 30, Old Kent-road, London, he was engaged. Delays occurred in his undertaking his duties, but on Saturday last he arrived in Penzance, and was initiated into his new sphere. Mr. Hemmings left home on Sunday morning, to spend the day with his family at Lelant, and, on his returning on Monday morning, found Mr. Viner inside the counter stupidly drunk. He called him into a private room, remonstrated with him, and told him he must quit a situation of responsibility and trust for which he had proved himself wholly unfitted. Viner abused his employer, tried to force his way into the shop, was thrust into the street by a side-door, ran into the shop, again abused Mr. Hemmings, and when a policeman was sent for, resisted, dragged things off the counter, and made a disturbance, and did damage. His excuse was that he was ill ever since his journey down to Penzance, and taking a little brandy on Monday to check his ailment, it overcame him. The Bench deemed it an aggravated offence, and sentenced him to one week's imprisonment with hard labour.

At the Woodbridge Petty Sessions, on July 23rd, Joseels Boulton, late assistant to Mr. B. D. Gall, pharmaceutical chemist, of Woodbridge, Suffolk, appeared on remand, charged with embezzling 3s. 6d. The prosecutor stated that having a suspicion that he was being robbed he communicated with the police, and through their agency purchases were made from the prisoner, serving in Mr. Gall's shop, to the extent of 7s. 6d., which were paid for with marked money. This should have been put in the till, which was kept locked by the prosecutor; but upon opening the till only 4s. of marked money was found. Upon being spoken to prisoner produced the missing 3s. 6d. from under some paper in a drawer. The prosecutor asked to be allowed to withdraw the case, as since the first hearing the offence had been acknowledged by the prisoner, and he did not wish him punished further. This, however, the magistrates refused to allow, and the prisoner having pleaded guilty was sentenced, in deference to Mr. Gall's appeal for leniency, to two months' imprisonment with hard labour.

"CLARKE'S BLOOD MIXTURE."—In the suit "F. J. Clarke, Lincoln, v. George Clarke, Manchester," Vice-Chancellor Malins has awarded a perpetual injunction, restraining the defendant or his servants and agents from using the words "Blood Mixture," or any other colorable imitation of the plaintiff's trade mark ("Blood Mixture") in or upon any bottles, labels, handbills, or advertisements sold, printed, and used, or issued by the defendant, and from in any other way representing any medicine, compounded by or for him, to be "Blood Mixture." Mr. F. J. Clarke has issued a "caution," calling attention to the above injunction, and announcing his determination to proceed against all persons imitating his trade-mark, or copying the wording of his labels, etc.

EXHIBITION AT MADRID.—During the month of October an exhibition is to be held at Madrid of national products and manufactures, of agriculture, mines, chemicals, industries, and graphic arts. Foreign products will be received by the executive at Madrid if carriage paid. Goods will be sold by the executive on a small commission charge. This is to be the first of a proposed series of Spanish exhibitions.

NEGLECTING HIS BUSINESS.—A doctor recently went out for a day's shooting, and on coming home complained that he hadn't killed anything. "That's because you have not been at home attending to your legitimate business," replied his wife.

THE *Boston Journal of Chemistry* tells us of a student who was asked what is the use of starch in germination, and who replied that "In the German nation, as elsewhere, starch is used for doing up linen and similar laundry purposes."

BURGOYNE, BURBIDGES, AND Co.'s ANNUAL EXCURSION.—The annual excursion of the *employés* connected with this firm to the Downs Hotel, Epsom, took place on the 19th July. The athletic sports passed off with great enthusiasm, but great disappointment was expressed at the result of the race for the Challenge Cup presented by the firm. The successful competitor who takes off this cup must win the race for three consecutive years. Mr. F. Goddard had won the race for the past two years, and it was fully anticipated that this year he would take the cup. Much, however, to the surprise and disappointment of everybody, he was taken suddenly ill during the race, and an enterprising competitor now places Goddard at a great disadvantage, as he must win the race for the next three years before he can lay claim to the cup. The *employés* and their friends sat down to an excellent dinner at two o'clock, under the presidency of F. Burbidge, Esq., who seemed particularly happy in his remarks to the successful competitors in the athletic sports, as they presented themselves to receive their hard-earned prizes. The usual loyal and other toasts terminated the proceedings, which had been throughout of the most enthusiastic character.

SUDDEN DEATH OF A WHOLESALE DRUGGIST.—Mr. Benjamin Yates, aged sixty-five, a wholesale druggist, carrying on business in Southwark-street, Borough, was found dead in a first-class railway carriage at Barnes Station on Saturday morning, July 19. He left Feltham (his country residence) by the 9.50 a.m. up train, apparently in his usual health. A Mr. Field entered the same carriage at Brentford, but noticed nothing particular about deceased till the train reached Chiswick, when another gentleman who there entered the train called his attention to deceased. The latter was leaning to one side, with his head resting on his hand. As he did not move when he was touched and spoken to, Mr. Field called for assistance at Barnes Station, and Mr. Watts, the station-master, had the body taken into the waiting room. A doctor was sent for, but on his arrival he found deceased quite dead. Some artificial teeth were found lying on the floor of the railway carriage near where deceased had sat, and it is supposed they had dropped from his mouth. Deceased's family physician, Dr. Kingsford, of Sunbury, stated that deceased, who had been under his care for ten or twelve years, was liable to apoplectic fits, and, in his opinion, apoplexy was the cause of death. Ebenezer Gaywood, deceased's gardener, also stated that he had seen deceased fall down in the garden in a fit, and remain unconscious for some time. At the inquest the jury returned as their verdict, "Found dead in a railway carriage at Barnes Station."



EARLY CLOSING.

(TO THE EDITOR OF THE "CHEMIST AND DRUGGIST.")

SIR,—I beg to enclose a letter received from the Secretary of the Early Closing Association in answer to my letter on the fortnightly half-holiday suggestion, which you kindly inserted in your June number of the CHEMIST AND DRUGGIST. I am sure you will by every means in your power endeavour to carry out the proposal. Without help, I fear assistants themselves will never be able to do much in the matter, for in tens of thousands of shops the hours are till 8.30 or 9, and what time is there left for any mutual combination, even if they had the means and wish to do so. What I would suggest is, that every tradesman's assistant throughout the United Kingdom should forward a "shilling" subscription yearly to the Early Closing Association, so that those gentlemen may have the means, either by advertisement, circulars, or even personal canvass, of ascertaining the feelings of employers regarding the fortnightly half-holiday. I cannot think any would refuse their consent to a proposal which would not interfere with or cause the slightest cessation of business. Before concluding this letter, I would most respectfully beg employers, if their opinion should be asked, to carry their thoughts back to the time when they were apprentices or assistants, perhaps years ago, but still within remembrance, and think how much they would have valued such a concession, and let me earnestly impress upon assistants the necessity for mutual action in this matter, and I trust every one will act on my suggestion of a "shilling" subscription; all can spare that sum, and when the *fortnightly half-holiday* is universal, as I trust it will be ere long, let them by increased exertions, and every means in their power, show their employers that it is a gain to all concerned.

I am Sir, your very obedient Servant,

July, 1873.

A WEST-END ASSISTANT.

The following is the letter from the Secretary of the "Early Closing Association" referred to in the above:—

EARLY CLOSING ASSOCIATION, (Instituted A.D. 1842),

100, Fleet-street, London, E.C., 17th July, 1873.

MY DEAR SIR,—I have read your letter in the CHEMIST AND DRUGGIST for June 14, 1873, signed "A West-end Assistant." You are quite right to presume that the Early Closing Association would respond as far as practicable to your appeal, and that it does not limit its labours simply to those who are its subscribers, although these necessarily have the first claim.

It will much simplify the discussion which you and other correspondents have raised in the above journal if I point out the importance of your relinquishing all hope of Parliamentary interference to regulate the hours of grown-up men. I am sorry to say that this most vain expectation has been doing much to retard the Early Closing Movement, especially in country towns. Waiting for this imaginary event, the assistants have in too many cases allowed precious time to slip by without at all attempting to improve their position by the old methods. I grieve to

see young men cherishing the most futile idea that Parliament will do for men in retail trade what it has never done for any other class of the employed. I am glad to say that we have now seen the end of this belief among the assistants at large, and the beginning of a recognition of the true state of things, and the true remedies to which we should address ourselves. Even the most sanguine agitators for Parliamentary interference do not now expect anything beyond the regulation of the hours of women and young persons.

But the evils under which you and your fellows are suffering are none the less real and pitiable. A personal canvass of the chemists of Edgware-road and elsewhere during the past winter brought them very vividly to my own experience. Unfortunately, too, in some cases young men do not welcome one in any effort to relieve them, and in Clerkenwell and the Borough, where we made a canvass, success was owing rather to the spontaneous action of the employers than to any demonstration on the part of the assistants. I should be exceedingly glad to hear from you that the young men in good localities are in earnest in the matter, and ready to take it up as the young men in other houses of business have done. My experience is that the young men of London could have had Early Closing years ago if they had really wanted it. Unfortunately, it is only one or two energetic men here and there who are willing to make the necessary effort.

I think yours is a very good proposition for immediate adoption, if employers will give it their kindly consideration, viz., the release of the assistant once a fortnight or oftener at two o'clock in the day. But this should not be a substitute for early closing. The earlier closing an hour or more every night should be sought in addition.

I trust as the result of this correspondence that we may soon see in the CHEMIST AND DRUGGIST a list of employers who have decided at once to give their assistants a weekly half-holiday, and to close one hour earlier every night. But pray help in awakening the assistants themselves from their apathy and indifference. Is it to be expected that all or any large portion of employers will force benefits on their assistants?

I should be most ready to confer with you more directly upon the questions you have brought before us, should you desire it.

I am, dear sir, faithfully yours,

HENRY WALKER, Secretary, Early Closing Association.

* * I have no objection at all to your giving publicity to this note if you think it would serve your cause.—H. W.

THE COCOA QUESTION.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—The present trial that is going on in London, for selling as cocoa an admixture of cocoa with farina and sugar, shows the necessity for some radical change in the way the trade is conducted. It is not surprising that grocers should often ask the question, What is the difference between cocoa and chocolate? or that manufacturers should be unable to give a satisfactory answer when they supply precisely the same kind of article in 14-lb. tins as chocolate powder, and in small packets as cocoa. With the exception of ourselves and perhaps one other firm, all the largest manufacturers make this their practice, and would not dispute it. The genuine nut is in all cases cleared and imported as cocoa. The word chocolate is derived from the Mexican word "Chocolatl" which is taken from the clashing sound of the stones between which the cocoa is bruised and mixed with sugar and spices, and is thus understood in every civilized country. When the Adulteration Act came into force we did not think it straightforward to label our articles prominently "Cocoa," and then to contradict ourselves by stating in small letters at the end of the packet that it was not actually cocoa but an admixture of cocoa with sugar and flour. As soon as we could alter our labels we called all genuine articles "cocoa," and all admixtures "chocolate" or "chocolate powder," and have found this to give general satisfaction to our customers, as the words thus used clearly define the character of the article.

We are, etc.,

CADBURY BROTHERS.



REVISED TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the publisher of the CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to "The Publisher of the CHEMIST AND DRUGGIST, Colonial Buildings, Cannon-street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

DISPOSAL.

Gallon Tinned Condenser, in good condition. 12s. 6d. 58/17.

Contents of Laboratory. Send for list. G. Rooke, King-street, Norwich.

A quantity of the Litre Pottle Wine Company's Wines, at an extra discount. 56/4.

Thirty 1-gallon Upright Store Bottles, complete. Chemist, 367, Moseley-road, Birmingham.

Lot of Photographic Apparatus, Lenses, etc.; cheap. Stamp for reply. W. Sharpe, Madeley, Salop.

"British Pharmacopœia." 4s., free; "Pharmaceutical Journal," posted day of arrival. What offers. 58/10.

Barber's Phosphor Paste for destroying vermin; 5 dozen 3d. size, 23 6d. size; the whole offered at 18s. 17/61.

Tooth Brushes, 2 dozen 4 rows, assorted patterns, 1½ dozen 5 rows, ditto; for 20s. cash. 18/61.

Circular Plate of Glass, sixteen inches diameter, three-eighths thick, inch square hole in centre. Cost a guinea; take 10s. 6d., or offers. 58/19.

Copland's "Dictionary of Practical Medicine," abridged, 1866; very good condition. 22s., carriage paid. G. Brown, Sandown, I.W.

Mill, with granite stones and large fly-wheel, works by hand or steam power; Eighteen Bottles genuine Leeming's Essence for 20s. Carriage paid. Fortune, Anstruther.

Pereira's "Selecta e Præscripta," 2s. 6d.; "Eton Latin Grammar," 10d.; Atfield's "Chemistry," 8s. T. A. S., Mr. Stead, Chemist, Heekmondwike.

Three Gallons Raspberry Vinegar, warranted pure, made from fresh fruit; 7s. per gallon. Samples sent for three stamps. 61/5.

Maw's Pessary Gun Metal Mould, 3s.; and Maw's Suppository Gun Metal Mould, 12s.; once used; good as new. H. Somerset, Worksop, Notts.

Very cheap, Two handsome Specie Jars, 36 and 27 inches high; also Four large Show Globes, and several other articles. Heap, Chemist, Ashton-under-Lyne.

Outside Mortar large, almost new; gold and black, with brackets complete. 21s. Frazer, 68, Edge-lane, Liverpool.

Nearly New, half-plate Camera (brass bound), and excellent Lens. For particulars, apply Goodman, Abingdon-buildings, Bath.

Twenty vols. "Pharmaceutical Journal," to June, 1873, unbound, clean. Offers, or would exchange for Anatomical or Medical Works. 81, Moor, Sheffield.

A fine 12 x 10 (Shepherd), and a whole plate Portrait Lens, cheap, or in exchange for mahogany drawers, fittings, and stock. W. Sharpe, Madeley, Salop.

- 5 x 4 gallon, and 1 x 2 gallon, pear-shaped Carboys, cut stoppers. Price £2. F. G. Ballard, Kingsbury, Aylesbury.
- A Vulcaniser and several Dentists' Tools for sale, or exchange for articles useful to a Chemist. On view at 5, Upper Baker-street, Regent's-park.
- Jalapine, Window Brasses, Gold Rings, Step Show Stands, Old Books, most Patent Medicines, 9s. 6d. per dozen. Carrington, Wincanton.
- Offer wanted for Three 3-light Cut Glass Chandeliers, with moons, etc., complete. Cost £15; are quite new, and have not been used. 15/61.
- A Denison's 3-ton patent Weighing Machine; has not been used. Invoice price £17. A reasonable offer accepted. 19/61.
- Handsome Mahogany Show Case, containing 250 1s. and 6d. Homœopathic Medicines by Epps. Quite new; cost £6 6s. Price £5. J. Isherwood, Chemist, Bromley, Kent.
- Attfield, Bentley, Royle, and Barber's "Pharmacopœia," Cook's "Botany," Lescher's "Elements of Pharmacy," and Evans and Lescher's "Cabinet of Materia Medica." Offers wanted. T. Hambridge, Eynsham, Oxon.
- Cash offers wanted for Evans, Lescher, and Evans' "Cabinet of Materia Medica Specimens," cost 50s.; almost equal to new; "Book of Botanical Specimens," cost 10s. 6d. G. Gilders, 8, Osborn-place, Blackheath.
- Homœopathic Medicines, by Ashton and Parson, about two gross, in good condition; 6d. and 1s. Pilules and Tinctures, at 2s. and 3s. per dozen, in one lot. "Chemist," Eccleston-street, Prescott.
- Three dozen Tooth's Liebig's Extract, 2 oz., 12s. 9d. per dozen; one dozen 4 oz., 23s. 6d.; eight 1 oz., 4s. 3½d. the lot. A few Kaye's Worsdell's, Gadd's Gout, and Snook's Pills, at 7s. per dozen. Thomas, Chemist, Bath.
- On Sale.—131 Mahogany Drug Drawers, with glass knobs and labels; nearly new; length, 17 feet; with mahogany shelving over, and lockers under drawers. Apply Walter Hall, Batley.
- Bargains.—A quantity of Drugs, Chemicals, and Druggists' Sundries. Lists on application, with stamped envelope and business card. Smith, chemist, Green-lane, Banbury, Oxon.
- A job lot of Pocket Pencils and Pen Knives on cards, in ivory, silver, gilt, and aluminum; also 2 cards India Rubber Bands with patent clasp, and 2 cards Key-chains. All somewhat tarnished. 16/61.
- One lb. Sodium; offers wanted; Pair of Ornamental Iron Carboy Stands, with circular trays attached, 30s.; Turner's Guinea Homœopathic Show Case, 15s.; Ebony-stained Glass Case, 2 feet 9 inches by 2 feet 14 inches by 12 inches, opens at back, 15s. Jowett, Lynton, Cheshire.
- To be sold cheap.—Eight gross 3-oz. Stoppered German Pomade Bottles, and 28 lbs. of large Honeycomb Sponge, finest quality, good shape, 9 in. to 15 in. diameter, free from sand; very light. J. S., 2, Copenhagen-street, Islington, N.
- Forceps, three sets, in cases, 18s.; one ditto, 25s.; one ditto, Clendon's 30s.; one ditto, Tomes', 36s.; one dozen Steel Gilt-handle Scalars and Stoppers, 7s.; Printing Press, 20s.; Pill Machine, 36, 21s.; Gas Stove, 10s.; Galvanic Battery, 20s.; Muspratt's "Chemistry," 30s.; one ounce Pure Virgin Otto of Roses, 21s. Address, J. S., 14, Netherthorpe-street, Sheffield.
- "British Pharmacopœia," 1867, 4s. 6d.; Attfield's "Chemistry," 2nd edition, 6s.; Oliver's "Structural Botany," 2s. 6d.; Barber's "Pocket Pharmacopœia," 3s. 6d.; Coleuso's "Algebra," 2s. 6d.; Collier's "British History," 1s.; Pereira's "Selecta Prescripta," 1s. 6d.; Cæsar's "Bella Gallica," 1 to 7 (Isbister's), 2s. 6d. First six volumes quite new, and in good condition. H. Payne, Alford, Lincolnshire.
- Post Free. Sampson's "Homœopathy," 2s.; Bowman's "Practical and Medical Chemistries," equal to new, 4th Editions, 3s. 6d. each (published at 6s. 6d. each); Stegall's "Celsus and Translation," 2s. 6d.; "Zoological Record," new, 15s. (published at 30s.); Proctor's "Other Worlds than Ours," 5s.; "Lawrence on Man," whole calf, 6s. 6d.; Paxton's "Anatomy," 5s. A. Davis, 161, Seven Sisters-road, London, N.
- A splendid new Microscope, with rackwork adjustment, moveable stage, polariscope stand, condenser for opaque objects, eyepiece, 2 inch, 1 inch, ½ inch, ¼ inch achromatic object-glasses, line boxes, stage and dissecting forceps, the whole complete, in mahogany box, cost a month ago £7, will take £4 10s, and pay carriage; Recipe of the Original American Soothing Syrup, 5s.; a beautiful Oil Painting, 21 inches by 11 inches, in massive gilt frame, subject—"Carnival, Grand Canal, Venice," by W. S. Price only £5, a real bargain. Apply to J. Wordend, Chemist, 22, Pitt-street, Liverpool.
- Taylor on "Poisons," 8s. 6d.; British Pharmacopœia, 1864, 2s. 6d.; ditto, with "Family Physician," 2s. 6d.; Thomson's "Dispensatory," 4s. 6d.; Hogg's "Vegetable Botany," 4s. 6d.; Wilson's "Inorganic Chemistry," 1s. 9d.; Glenny's "Handbook of Gardening," 3s. 6d.; "Practical Treatise on Chemical Analysis," by Rose, translated by Normandy (3 vols., complete), handsomely bound, 12s. 6d.; Mowell's "Grammar" (1870), 2s. 3d.; "Principia Latina," Part II., 2s.; McDowall's "Cæsar," new, 2s. 3d.; Chambers' "Latin Grammar," 2s. 2d.; "Latin Primer," 2s. 2d.; Church on "British Pharmacopœia," 1s. 6d.; Thomson's "Chemistry," 3s.; Andrew's "Cyclopædia," nineteen consecutive unbound numbers, 9s. the lot; Morison's "Plantarium," 2 vols. (cost £20) price £3 3s. S. Roberts, 55, Bold-street, Liverpool.

WANTED.

Price's "Sherwoodale." Jeffery, Tring.

A large Marble Pestle and Mortar. H. Lloyd, manufacturing chemist, Totnes.

A quantity of 3-oz. Green Glass Flat Bottles. State prices "Chemist," 128, High-street, Sittingbourne.

Acton's "Reproductive Organs." G. Tooke, King-street, Norwich.

Two Large Show Jars, Tall Mahogany Round Carboy Stands Good. Frazer, 68, Edge-lane, Liverpool.

Iron Mortar and Pestle, bell shape, 6 or 7 quart. E. Howard, 184, Old Kent-road, London, S.E.

Bottles, Fixtures, Soda-Water Machine. Lamacraft, High-street, East Grinstead.

A Chemical Balance and other apparatus; also a high-power Microscopic Object Glass. 56/15.

A ½ gallon Tincture Press, fig. 1. Maw's list preferred. E. M. Grose, Taunton.

Balfour's "Class-Book of Botany." Good condition. State price. D. S. Anderson, chemist, Musselburgh.

"Chemist and Druggist," February to June inclusive, clean and perfect. Thomas, Chemist, Bath.

Mahogany Glass Cases (to fix against wall) about 24 inches high, 40 wide, 4 deep. State full particulars. Henry Pattison, chemist, Shrewsbury.

Fresh or Dried Specimens of Belladonna, Hyoscyamus, Stramonium, Sabine, Ecballium, Conium, and Juniper. T. J., 39c, Belvidere-street, Mansfield.

A Drug Counter with Drawers complete, 6 or 8 feet long. Also a Wall Show Case, 6 feet square, or thereabouts. Jenkinson, chemist, Sheffield.

Trade Memoranda.

MR. FLOYD, wholesale and retail chemist, of Bury St. Edmunds, has removed to more extensive premises in that town.

The "Manx Fairy" is the title of a new and sweet perfume from Mona's scent-prolific isle. Mr. R. C. Turner, of Douglas, is the proprietor.

Mr. Hickisson, who is known in the trade as "the daughter of the late John Bond," has just brought out a new style of marking ink, which he has appropriately designated the Bond Street."

Dentocrete is the somewhat classical name of some new Tooth Powder Tablets introduced by Mr. A. Clifford Eskell, an eminent dentist. These tablets are prettily cut little lozenges, one being sufficient for each time of using. The proprietor claims many advantages for these tablets over powders, and it is quite evident that their use is attended with less mess. They are put up in novel-shaped and showy boxes, and are sold at half-a-crown the box.

On Friday last, a chimney two hundred feet high, belonging to the Felling Chemical Works, Gateshead, fell to the ground, and caused a great wreck of property within the limits of its descent. Two acid chambers were destroyed, besides a quantity of chemicals, the damage altogether amounting to several thousands of pounds. The chimney had for some years been out of plumb, and was being restored by a Manchester firm when it was found to be unsafe. Nobody, fortunately, was injured by the accident.

Messrs. Scrivener, Gill and Co., of London and Ipswich, have brought before us their patent magnetic appliances, which they call Amynterion. We are by no means disposed to deny the possibility of magnetic curative influence, and we have met with several persons who energetically advocate its claims from personal experience. But the subject is far too little understood to allow of any conclusive theory, and we decline to say more at present than that these belts certainly do possess considerable magnetic properties, and are soundly and elegantly manufactured.



LIQUIDATIONS BY ARRANGEMENT OR COMPOSITION.

Notices of first meetings have been issued in re the following estates:—

ARRETT, JOHN JAMES, 75, Blackfriars-road, doctor.
 ANNELL, JOHN, 5, Little's-terrace, Li-card-road, Egremont, surgeon, etc.
 ALBION, WILLIAM HENRY, 38, Bedford-place, Southampton, chemist.
 BENSWELL, JOHN PEARSON, Cavendish-street, Ramsgate, lato Steeple Aston, near Oxford, surgeon.
 AVIES, RICHARD W., Nantwich, Cheshire, chemist.
 AIR, QUINTIN BURNS, 8, Chapel-place, Tunbridge Wells, dentist.
 IGGS, FREDERICK SEAGRAVE, Heighington, Lincolnshire, surgeon.
 ORNBY, ALFRED THOROLD, Tuxford, chemist.
 MOUNTAIN, ROBERT, Montpelier-parade, Harrogate, chemist.
 HLP, NICHOLAS CORNELIUS, 5, Market-street, Devonport, chemist and tea-dealer.
 ARBUTT, JAMES, Heckmondwike, chemist, grocer, wine, spirit, and also merchant.
 ERNON, EDWARD, 30, Wavertree-road, Liverpool, surgeon.

DIVIDENDS DECLARED.

STTERIDGE, RICHARD (Bkt.), Osnaburgh-street, surgeon. 1st div. 1/8.
 DOCKER, THOMAS, and CHARLES H. HARRIS (Bkt.), St. Ives, Hunts, chemists. 1st div. 10/.

PARTNERSHIPS DISSOLVED.

CLINE and ROPER, Redcliff-street, Bristol, druggists. July 18. Debts by J. A. Roper.
 REEN and MOUNTAIN, 115, Great Thornton-street, Hull, chemists. June 30. Debts by J. J. Mountain.
 CANOREW and CAROLAN, 125, Three Colt-street, Limehouse, surgeons. June 3. Debts by J. J. McAndrew.
 ADFOED and SMITH, trading as THE BESWICK GELATINE AND ALKALI CO., Bradford, near Manchester, manufacturing chemists. July 25.
 ENDLE and LLEWELLYN, Newington-causeway, trading as FREDERICK WALTER SMITH, at 103, Blackman-street, Southwark, surgeons. July 15.
 LARP and LLOYD, Grange-road, Bermondsey, surgeons. June 30.

BANKRUPTS DISCHARGED.

FORIE, ROBERT FERGUSON, sometime druggist, Glasgow, now a partner of Houston and Dickie, Glasgow, accountants. Sequestrated Dec. 18, 1868, discharged July 21, without composition.
 HILVER, THOMAS, George-street, Glasgow, and Croy, manufacturing chemist and oil-merchant, partner of Thomas Ogilvie and Co. Sequestrated Dec. 9, 1872, discharged July 21, without composition.

TRADE REPORT.

THE holiday months always affect the markets very perceptibly, and dry up for the time whatever speculative energy might have been afloat. This feature is especially marked this year, and consequently we have less than usual to report in any of the departments of business which come especially under our notice. The breaking up of Parliament relieves us of all apprehension of annoying legislation for awhile, and shopkeepers have the right, at least for another six months, of keeping open to what hour they please. Mr. Gladstone's return to the office of Chancellor of the Exchequer is certainly calculated to restore in City circles that confidence which Mr. Lowe has so persistently set himself to destroy.

There is a growing feeling in favour of tribunals of commerce, the idea being to provide special courts on the model of the county courts to try cases of dispute in trade matters. There is unquestionably something in this proposal, but it needs careful organization. An experimental bill was introduced into Parliament during the past session, and if the commercial community should show itself in earnest about this matter, there is little doubt that such tribunals might soon be established. It is to be hoped that they would in time lead to a general reform in the present loose system in regard to debtors and creditors.

The chemical markets all through the year have been most monotonous. At present there is a good average demand both for home and export, but it hardly keeps pace with the supply, and consequently prices are in most instances slightly easier. Citric Acid is very dull, and holders have given way a few pence, but without exciting any enthusiasm among purchasers. Cream of Tartar and Tartaric Acid, on the other hand are firm, and in demand. Quicksilver is still a little dearer, and now stands at the round figure of £15 per bottle. There is no demand for Iodine just now, and as it is said that the dyers of France, who last year bought it in such considerable quantities, have partially discontinued its employment, there will hardly be the same opportunity afforded for a brilliant coup as was formerly presented. Quinine is higher, and very firm; Soda and Potash rule slightly lower, and Bleaching Powder is again easier.

Large quantities of drugs have been represented in the auction rooms, and the demand has been fair, but not equal to stocks. Castor Oil is in abundant supply, and prices are lower for all qualities. Some considerable transactions in Camphor last month gave an upward tendency to that drug, but the arrival of the *Ulysses* with 1,400 cases has checked the movement, and doubtless the sales of the 14th instant will indicate the abundant supply by lower prices. A large lot of Tinnevelly Senna is on the market, but it is all of inferior quality. Best parcels ensure good prices. Considerable quantities of Ipecacuanha and Jalap are also advertised for the sales of the 14th, and lower prices for these drugs may be anticipated.

The first arrival of the new crop of Opium has appeared in our market. We are informed that in quality it is considered hardly up to the average, while from Smyrna comes the stereotyped report that the crop is small, and that higher prices are to be looked for. It is extremely probable that for best quality the quotations will be higher; but there seems no tendency towards a general rise at present.

We may take credit for having strongly urged our readers, during the past two months, to make their purchases of Olive Oil. The price has been very low, but it is now going up. A rise of nearly £2 per ton, on the average, has been effected since we last wrote, and we have every reason to believe that it will advance considerably yet. The reports of the crops are generally unfavourable, and there is every indication, if not of extreme prices, certainly of quotations much beyond what now appear.

A considerable advance has been effected in Ginger, averaging 5s. per cwt.

Monthly Price Current.

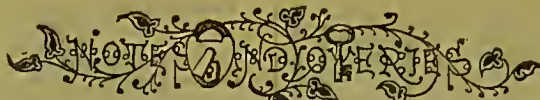
The prices quoted in the following list are those actually obtained in Mining-lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.

	1873.		1872.	
ACIDS—	s. d.	s. d.	s. d.	s. d.
Acetic per lb.	0 4 to	0 0	0 4½ to	0 0
Citric	4 2 ..	4 3	4 2 ..	4 3
Hydrochlor. per cwt	4 0 ..	7 0	4 0 ..	7 0
Nitric per lb.	0 5 ..	0 5½	0 5 ..	0 5½
Oxalic	0 8 ..	0 0	1 0½ ..	1 0½
Sulphuric	0 0½ ..	0 1	0 0½ ..	0 1
Tartaric crystal ..	1 7½ ..	1 7½	1 6½ ..	0 0
powdered ..	1 7½ ..	0 0	1 6½ ..	0 0
ANTIMONY ore..... per ton	220 0 ..	240 0	270 0 ..	290 0
crude .. per cwt	40 0 ..	42 0	38 0 ..	40 0
regulus.	0 0 ..	0 0	0 0 ..	0 0
star	57 0 ..	60 0	72 0 ..	75 0
ARSENIC, lump.....	20 0 ..	20 6	18 6 ..	0 0
powder.....	10 0 ..	0 0	7 9 ..	8 0
BRIMSTONE, rough .. per ton	127 6 ..	145 0	140 0 ..	145 0
roll per cwt	9 9 ..	10 0	9 9 ..	10 0
flour.....	11 6 ..	12 6	12 6 ..	0 0
IODINE, dry per oz.	1 5½ ..	1 6	1 11 ..	2 1
IVORY BLACK, dry. . per cwt.	8 6 ..	0 0	8 6 ..	0 0
MAONESIA, calcined. per lb.	1 6 ..	0 0	1 2 ..	1 3
MERCURY per bottle	300 0 ..	0 0	270 0 ..	0 0
MINIUM, red per cwt.	25 3 ..	25 6	21 3 ..	21 6
orange	35 6 ..	0 0	31 6 ..	32 0
PRECIPITATE, red per lb.	4 11 ..	0 0	4 2 ..	0 0
white	4 8 ..	0 0	0 0 ..	0 0
PRUSSIAN BLUE	0 0 ..	0 0	0 0 ..	0 0
SALTS—				
Alum per ton	170 0 ..	0 0	160 0 ..	175 0
powder	170 0 ..	0 0	175 0 ..	180 0
Ammonia:				
Carbonate per lb.	0 7½ ..	0 7½	0 7 ..	0 7½
Hydrochlorate, crude,				
white..... per ton	650 0 ..	0 0	640 0 ..	0 0
British (see Sal Ammoniac)				
Sulphate per ton	360 0 ..	0 0	415 0 ..	435 0
Argol, Cape per cwt	37 0 ..	96 6	75 0 ..	90 0
France	75 0 ..	86 0	65 0 ..	30 0
Oporto, red ..	32 0 ..	32 6	34 0 ..	37 6
Sicily,	60 0 ..	65 0	00 0 ..	70 0
Ashes (see Potash and Soda)				
Bleaching powd. . per cwt.	12 0 ..	12 3	14 0 ..	14 6
Borax, crude	50 0 ..	95 0	60 0 ..	75 0
British refud. .	102 6 ..	0 0	100 0 ..	0 0
Calomel per lb.	4 6 ..	0 0	3 10 ..	0 0
Copper:				
Sulphate per cwt.	29 6 ..	31 0	34 0 ..	34 6
Copperas, green .. per ton	60 0 ..	62 6	60 0 ..	62 6
Corrosive Sublimate. p. lb.	3 9 ..	0 0	3 3 ..	0 0
Cr. Tartar, French, p. cwt.	106 0 ..	107 0	105 0 ..	110 0
brown ..	87 6 ..	95 0	97 6 ..	100 0
Epsom Salts per cwt.	5 9 ..	6 3	5 9 ..	6 3
Glauber Salts	4 6 ..	5 0	5 0 ..	6 0
Lime:				
Acetate, white, per cwt.	14 6 ..	21 0	14 0 ..	22 6
Magnesia: Carbouate ..	42 6 ..	45 0	42 6 ..	45 0
Potash:				
Bichromate per lb.	0 8½ ..	0 0	0 8 ..	0 0
Carbonate:				
Potashes, Canada, 1st				
sort per cwt.	35 9 ..	30 0	37 0 ..	33 0
Pearlashes, Canada, 1st				
sort per cwt.	49 0 ..	0 0	58 0 ..	0 0
Chlorate per lb.	1 3 ..	1 3½	1 6 ..	1 7½
Prussiate	1 4 ..	0 0	1 5½ ..	1 5½
red	3 1 ..	0 0	3 1 ..	0 0
Tartrate (see Argol and Cream of Tartar)				
Potassium:				
Chloride per cwt.	3 6 ..	9 0	0 9 ..	10 0
Iodide..... per lb.	22 0 ..	0 0	83 6 ..	0 0
Quinine:				
Sulphate, British, in				
bottles per oz.	8 6 ..	0 0	7 7 ..	0 0
Sulphate, French ..	8 3 ..	0 0	7 7 ..	7 0
Sal Acetos per lb.	1 0 ..	0 0	1 4 ..	0 0
Sal Ammoniac, Brit. cwt.	44 0 ..	45 0	48 0 ..	49 0
Saltpetre:				
Bengal, 6 per cent or				
under per cwt.	25 9 ..	26 0	28 0 ..	29 0
Bengal, over 6 per cent.				
per cwt.	23 0 ..	25 6	20 9 ..	27 0
British, refined ..	20 0 ..	30 0	31 9 ..	32 3
Soda: Bicarbonate, p. cwt.	18 0 ..	0 0	18 0 ..	0 0
Carbouate:				
Soda Ash..... per deg.	0 5½ ..	0 0	0 3½ ..	0 0
Soda Crystals per ton	130 0 ..	0 0	152 0 ..	155 0
Hyposulphite. . per cwt	16 0 ..	16 0	16 0 ..	17 6
Nitrate per cwt.	14 3 ..	15 0	14 0 ..	15 0
SUGAR OF LEAD, White, cwt.	48 0 ..	0 0	45 0 ..	40 0

	1873.		1872.	
	s. d.	s. d.	s. d.	s. d.
SUGAR OF LEAD, Brown, cwt.	32 6 to	33 0	30 0 to	0
SULPHUR (see Brimstone)				
VERDIORIS per lb.	1 1½ ..	1 6	1 1 ..	1
VERMILION, English. .	4 0 ..	4 8	3 10 ..	0
China.....	4 3 ..	4 4	4 0 ..	4
DRUGS.				
ALGEE, Hepatic.... per cwt.	80 0 ..	200 0	100 0 ..	240
Socotrine ..	110 0 ..	320 0	160 0 ..	420
Cape, good..	30 0 ..	34 0	28 0 ..	30
Inferior ..	16 0 ..	28 0	22 0 ..	27
Barbadoes ..	80 0 ..	200 0	76 0 ..	200
AMBERORIS, grey..... oz.	27 0 ..	30 0	24 0 ..	
BALSAM —				
Canada per lb.	3 0 ..	4 0	1 6 ..	
Capivi	2 10 ..	3 0	1 11 ..	
Peru	9 0 ..	9 1	9 6 ..	
Tolu	1 10 ..	2 0	1 9 ..	1
BARKS—				
Canella alba per cwt.	15 0 ..	25 0	15 0 ..	25
Cascarilla.....	30 0 ..	35 0	26 0 ..	37
Peru, crown & grey per lb.	1 0 ..	2 10	1 0 ..	3
Calisaya, flat ..	3 0 ..	3 9	3 2 ..	3
quill ..	3 3 ..	5 0	3 2 ..	3
Carthagea ..	0 10 ..	1 8	0 10 ..	2
Pitayo	0 6 ..	2 2	0 7 ..	1
Red	1 10 ..	0 0	1 10 ..	6
Buchu Leaves	0 1½ ..	0 9	0 3½ ..	1
CAMPOR, China.. per cwt.	75 0 ..	0 0	78 0 ..	79
Japan	32 6 ..	0 0	80 0 ..	0
Refin Eng. per lb.	1 6 ..	0 0	1 3½ ..	1
CANTHARIDES	6 0 ..	6 6	5 2 ..	5
CHAMOMILE FLOWERS p. cwt	45 0 ..	80 0	45 0 ..	70
CASOREUM per lb.	7 0 ..	20 0	3 0 ..	30
DRAGON'S BLOOD, lp. p. cwt.	110 0 ..	240 0	110 0 ..	220
FRUITS AND SEEDS (see also Seeds and Spices)				
Anise, China Star pr cwt.	135 0 ..	140 0	105 0 ..	110
Spanish, &c. .	20 0 ..	42 0	25 0 ..	35
Beans, Tonquin .. per lb.	2 3 ..	3 0	1 0 ..	1
Cardamoms, Malabar				
good ..	4 6 ..	5 6	6 0 ..	7
inferior ..	3 3 ..	4 3	5 0 ..	5
Madras ..	2 2 ..	4 6	2 6 ..	6
Ceylon ..	4 3 ..	4 6	4 0 ..	4
Cassia Fistula. . per cwt.	10 0 ..	20 0	10 0 ..	20
Castor Seeds ..	5 0 ..	10 0	10 0 ..	12
Cocculus Indicus ..	13 0 ..	20 6	14 0 ..	16
Colocynth, apple. . per lb.	0 4 ..	0 9	0 3 ..	0
Croton Seeds .. per cwt.	45 0 ..	54 0	55 0 ..	59
Cubels	25 0 ..	26 0	25 0 ..	26
Cumin	13 0 ..	29 0	25 0 ..	32
Dividivi	11 0 ..	15 0	12 0 ..	15
Fenugreek	9 0 ..	23 0	12 0 ..	22
Guinea Grains ..	25 6 ..	26 6	40 0 ..	0
Juniper Berries ..	9 0 ..	10 6	11 0 ..	11
Nux. Vomica.....	10 0 ..	17 0	12 0 ..	16
Tamarinds, East India ..	5 0 ..	20 0	3 0 ..	16
West India, now ..	15 0 ..	30 0	26 0 ..	36
Vanilla, large per lb.	70 0 ..	80 0	45 0 ..	55
inferior ..	35 0 ..	67 0	27 0 ..	43
Wormseed .. per cwt.	0 0 ..	0 0	0 0 ..	0
GINSENG, Preserved, in bond				
(duty 1d. per lb.) per lb.	0 6 ..	0 9	0 6½ ..	0 1
GUMS (see separate list)				
HONEY, Chili per cwt.	34 0 ..	41 0	32 0 ..	48
Cuba	0 0 ..	0 0	35 0 ..	50
Jamaica ..	25 0 ..	40 0	35 0 ..	58
Australian ..	22 0 ..	40 0	0 0 ..	0
IPECACUANHA per lb.	3 6 ..	4 0	4 10 ..	5
ISINOLASS, Brazil..	2 9 ..	4 0	2 8 ..	4
Tongue sort ..	3 2 ..	5 0	3 3 ..	5
East India ..	1 0 ..	4 0	1 0 ..	4
West India ..	4 3 ..	4 5	3 11 ..	4
Russ. long staple ..	3 0 ..	12 6	8 0 ..	11
inferior ..	3 6 ..	7 6	3 6 ..	7
Simovia ..	2 0 ..	4 6	2 0 ..	3
JALAP, good	1 6 ..	2 0	1 3 ..	2
infer. & stems ..	1 0 ..	1 4	0 6 ..	1
LEMON JUICE ... per degree	0 2½ ..	0 0	0 2½ ..	0
LIQUORICE, Spanish per cwt.	0 0 ..	0 0	35 0 ..	37
Italian ..	60 0 ..	90 0	40 0 ..	60
Liquorice Root ..	10 6 ..	15 0	0 0 ..	0
MANNA, flaky per lb.	2 6 ..	3 3	3 3 ..	3
small.....	1 4 ..	1 6	1 10 ..	2
MUSK, Pod	20 0 ..	40 0	19 0 ..	45
Grain	53 0 ..	58 0	0 0 ..	0
OILS (see also separate List)				
Almond, expressed per lb.	1 0 ..	0 0	1 1 ..	0
Castor, 1st pale	0 5½ ..	0 0	0 5 ..	0
second ..	0 5 ..	0 0	0 4½ ..	0
infer. & dark ..	0 4½ ..	0 0	0 4 ..	0
Bombay (in casks) ..	0 4½ ..	0 0	0 4½ ..	0
Cod Liver per gall.	4 0 ..	6 0	3 6 ..	5
Croton..... per oz.	0 3 ..	0 4	0 3 ..	0
Essential Oils:				
Almond	30 0 ..	0 0	35 0 ..	0
Anise-seed	10 3 ..	0 0	9 3 ..	0
Bay	0 0 ..	0 0	65 0 ..	70
Bergamot	9 0 ..	18 0	8 0 ..	15
Cajeput, (in bond) per oz.	2 4 ..	2 5	0 0 ..	0
Caraway	5 6 ..	6 3	5 6 ..	6
Cassia	5 11 ..	6 0	6 3 ..	0
Cinnamon	1 0 ..	5 0	1 0 ..	5
Cinnamon-leaf. .	0 2 ..	0 3½	0 2 ..	0
Citronelle	0 1½ ..	0 2	0 2½ ..	0

1873.				1872.				1873.				1872.			
Essential Oils, continued:—								Oils, continued:—							
s. d.	to	s. d.		s. d.	to	s. d.		£ s.	d.	to	£ s.	d.	to	£ s.	d.
Clove.....per lb.	5 3	to	0 0	4 6	to	0 0		Whale, South Sea, pale, pertun	34 0	to	0 0	33 10	to	32 0	0
Juniper....."	1 9	..	2 0	1 3	..	2 4		yellow "	32 0	..	33 0	37 0	..	38 0	0
Lavender....."	1 10	..	5 6	3 6	..	6 0		brown "	30 0	..	31 0	33 0	..	0 0	0
Lemon....."	8 6	..	15 0	5 0	..	15 0		East India, Fish "	26 10	..	27 0	23 10	..	0 0	0
Leonigrass.....per oz.	0 3	..	0 0	0 5	..	0 0		OLIVE, Gallpoll.....per ton	44 0	..	0 0	46 10	..	0 0	0
Neroli....."	0 5	..	0 6	0 5	..	0 6		Tricete....."	43 0	..	45 0	45 0	..	46 0	0
Nutmeg....."	0 8	..	0 8½	0 7	..	0 7½		Levant....."	39 0	..	40 0	43 10	..	44 0	0
Orange.....per lb.	8 0	..	11 0	7 0	..	3 0		Mogador....."	38 10	..	0 0	13 0	..	0 0	0
Otto of Roses.....per oz.	15 0	..	27 0	12 0	..	21 0		Spanish....."	41 0	..	0 0	45 0	..	46 0	0
Patchouli....."	8 9	..	4 0	4 0	..	4 3		Sicily....."	41 0	..	0 0	45 0	..	0 0	0
Peppermint:								Cococanut, Cochin....."	38 0	..	35 10	38 10	..	0 0	0
American.....per lb.	15 0	..	15 6	13 0	..	14 0		Ceylon....."	32 0	..	32 10	35 0	..	36 0	0
English....."	29 0	..	34 0	30 0	..	33 0		Sydney....."	28 0	..	32 0	31 0	..	35 0	0
Rosemary....."	1 4	..	1 10	1 9	..	2 0		GROUND NUT AND GINOLEY:							
Sassafras....."	2 6	..	3 8	3 0	..	3 6		Bombay....."	0 0	..	0 0	0 0	..	0 0	0
Spearmin....."	6 0	..	19 0	4 0	..	16 0		Madras....."	36 10	..	0 0	35 0	..	36 0	0
Thyme....."	1 10	..	1 11	1 10	..	2 0		PALM, fino....."	37 10	..	0 0	39 0	..	0 0	0
Mace, expressed.....per oz.	0 2	..	0 3	0 1½	..	0 3		LINSEED....."	33 5	..	33 10	37 0	..	37 5	0
OFICIN, Turkey.....per lb.	24 0	..	27 0	20 0	..	22 0		RAPESEED, English, pale....."	37 0	..	0 0	39 10	..	40 0	0
inferior....."	12 0	..	20 0	12 0	..	19 0		brown....."	34 10	..	35 0	37 10	..	38 0	0
QUASSIA(bitter wood) per ton	70 0	..	90 0	77 6	..	90 0		Foreign pale....."	0 0	..	0 0	40 0	..	41 0	0
RHUBARB, China, good and fine.....per lb.	2 9	..	5 9	2 3	..	6 0		brown....."	0 0	..	0 0	37 10	..	0 0	0
Good, mid. to ord....."	0 10	..	2 8	0 3	..	2 0		COTTONSEED....."	28 0	..	28 10	34 0	..	0 0	0
Dutch trimmed....."	8 0	..	10 0	9 0	..	9 5		LARD....."	42 0	..	0 0	42 0	..	44 0	0
Russian....."	0 0	..	0 0	0 0	..	0 0		TALLOW....."	29 0	..	0 0	30 0	..	0 0	0
ROOTS—Calumba.....per cwt.	10 0	..	18 0	23 0	..	40 0		TURPENTINE, American, cks....."	32 6	..	0 0	35 6	..	0 0	0
China....."	16 0	..	18 0	23 0	..	28 0		French....."	0 0	..	0 0	37 0	..	0 0	0
Galaogal....."	18 0	..	29 0	16 0	..	19 0		PETROLEUM, Crude....."	0 0	..	0 0	0 0	..	0 0	0
Geotkin....."	18 0	..	19 0	20 0	..	22 0		refined, per gall.	1 1½	..	1	1 5	..	0 0	0
Hellebore....."	30 0	..	33 0	30 0	..	32 0		Spirit....."	0 8½	..	0 9	1 2	..	0 0	0
Orris....."	36 0	..	80 0	47 0	..	70 0		SEEDS.							
Pellitory....."	38 0	..	39 0	27 0	..	38 0		CANARY.....per qr.	46 0	..	54 0	43 0	..	52 0	0
Pink.....per lb.	0 10	..	1 0	0 9	..	1 3		CARAWAY, English per cwt.	33 0	..	42 0	36 0	..	40 0	0
Rhatany....."	0 5	..	1 4	0 4	..	0 11		German, &c....."	26 0	..	36 0	23 0	..	34 0	0
Seneca....."	3 0	..	5 0	4 0	..	4 6		CORIANDE....."	13 0	..	20 0	20 0	..	25 0	0
Snake....."	1 2	..	1 3	1 2	..	0 0		HEMP.....per qr.	40 0	..	44 0	40 0	..	44 0	0
SAFFRON, Spanish....."	23 0	..	25 0	27 0	..	37 0		LINSEED, English per qr....."	53 0	..	68 0	0 0	..	0 0	0
SALEP.....per cwt.	170 0	..	180 0	170 0	..	200 0		Black Sea & Azof....."	53 0	..	53 6	60 9	..	0 0	0
SARSAPARILLA, Lima per lb.	0 6	..	0 7	0 7	..	0 9		Calcutta....."	61 9	..	62 0	63 0	..	64 0	0
Para....."	1 3	..	0 0	1 2	..	1 3		Bombay....."	63 0	..	0 0	64 0	..	0 0	0
Honduras....."	1 1	..	1 8	1 2	..	1 8		St. Petrsbrg....."	55 0	..	50 0	56 0	..	60 0	0
Jamaica....."	2 0	..	2 4	1 7	..	2 11		Mustard, brown.....per bshl.	13 0	..	16 0	13 0	..	16 0	0
SASSAFRAS.....per cwt.	0 0	..	0 0	0 0	..	0 0		white....."	9 0	..	9 0	8 0	..	9 6	0
SCAMMONY, Virgin.....per lb.	26 0	..	31 0	26 0	..	32 0		POPPY, East India per qr.	60 0	..	60 6	60 0	..	61 0	0
second & ordinary....."	14 0	..	25 0	10 0	..	25 0		SPICES.							
SENA, Bombay....."	0 2	..	0 5	0 2½	..	0 5		CASSIA LIONE.....per cwt.	75 0	..	80 0	86 0	..	100 0	0
Tinnivelly....."	0 2½	..	1 0	0 3	..	1 3		Vera....."	27 0	..	60 0	33 0	..	70 0	0
Alexandria....."	0 4	..	1 10	0 3½	..	1 7		Buds....."	117 6	..	120 6	125 0	..	137 6	0
SERMACE, refined....."	1 6	..	0 0	1 6	..	0 0		CINNAMON, Ceylon,							
American....."	1 2	..	1 3	1 2	..	1 3		1st quality.....per lb.	1 8	..	3 6	2 3	..	3 9	0
SQUILLS....."	0 2	..	0 3	0 1	..	0 2		2nd do....."	1 6	..	3 0	2 1	..	3 7	0
GUMS.								3rd do....."	1 2	..	2 9	1 9	..	3 1	0
AMMONIAC drop.....per cwt.	30 0	..	130 0	160 0	..	200 0		Tellicherry....."	2 7	..	3 0	2 9	..	3 2	0
lump....."	50 0	..	80 0	30 0	..	130 0		CLOVES, Penang....."	1 0	..	1 2	1 2	..	1 5	0
ANIMI, fine washed....."	220 0	..	270 0	280 0	..	330 0		Amboyna....."	0 7½	..	0 11	0 6½	..	1 0	0
boldscraped....."	130 0	..	220 0	230 0	..	290 0		Zanzibar....."	0 3	..	0 8½	0 6	..	0 6½	0
sorts....."	100 0	..	200 0	140 0	..	230 0		GINGER, Jam, fine per cwt.	100 0	..	252 0	90 0	..	210 0	0
dark....."	30 0	..	95 0	90 0	..	130 0		Ord. to good....."	62 0	..	98 0	46 0	..	87 0	0
ARABIC, E. I., fine....."	60 0	..	70 0	70 0	..	84 0		African....."	51 0	..	0 0	40 0	..	0 0	0
pale picked....."	75 0	..	78 0	75 0	..	84 0		Bengal....."	50 0	..	0 0	35 0	..	0 0	0
arts, gd. to fin....."	50 0	..	60 0	60 0	..	69 0		Malabar....."	50 0	..	0 0	35 0	..	36 0	0
garblings....."	20 0	..	60 0	23 0	..	50 0		Cochin....."	62 0	..	120 0	42 0	..	125 0	0
TURKEY, pick. gd to fin....."	150 0	..	220 0	160 0	..	210 0		PEPPER, Blk, Malabar, per lb.	0 7½	..	0 3	0 6½	..	0 7½	0
second & inf....."	80 0	..	130 0	85 0	..	150 0		Singapore....."	0 7	..	0 0	0 6½	..	0 0	0
in sorts....."	40 0	..	70 0	65 0	..	80 0		White, Tellicherry....."	2 0	..	0 0	0 0	..	0 0	0
Gedda....."	20 0	..	40 0	30 0	..	42 0		Cayenne....."	1 0	..	2 0	1 6	..	1 11	0
BARBARY, white....."	50 0	..	57 0	0 0	..	0 0		MACE, 1st quality.....per lb.	3 5	..	4 0	3 11	..	4 4	0
brown....."	30 0	..	40 0	36 0	..	44 0		2nd and inferior....."	2 10	..	3 4	3 6	..	3 10	0
AUSTRALIAN....."	27 0	..	45 0	29 0	..	45 0		NUTMEOS, 73 to 60 to lb.	3 2	..	4 5	3 4	..	4 0	0
ASSAFETIDA, com. to gd....."	23 0	..	70 0	75 0	..	100 0		90 to 30....."	3 0	..	3 1	3 2	..	3 3	0
BENJAMIN, 1st qual....."	170 0	..	450 0	200 0	..	520 0		132 to 95....."	2 7	..	2 11	2 10	..	3 1	0
2nd....."	140 0	..	210 0	150 0	..	210 0		PIMENTA....."	0 2½	..	0 3	0 3	..	0 3½	0
3rd....."	70 0	..	85 0	65 0	..	90 0		VARIOUS PRODUCTS.							
COPAL, Angola red....."	120 0	..	135 0	140 0	..	150 0		COCHINEAL—							
Benguola....."	110 0	..	115 0	110 0	..	115 0		Honduras, black.....per lb.	2 3	..	3 4	2 6	..	3 6	0
Sierra Leone.....per lb.	0 3	..	0 9	0 3½	..	0 11		" silver....."	2 4	..	2 7	2 4	..	2 7	0
Manilla.....per cwt.	13 0	..	23 0	21 0	..	39 0		" pasty....."	2 1	..	2 3	2 11	..	2 2	0
DAMMAR, pale....."	47 0	..	50 0	57 0	..	60 0		Mexican, black....."	2 3	..	2 5	2 5	..	2 8	0
EUPHORBUM....."	11 0	..	15 0	15 0	..	17 0		" silver....."	2 1	..	2 2	2 2	..	2 3	0
GALBANUM.....per lb.	1 6	..	2 0	0 0	..	0 0		Teneriffe, black....."	2 3	..	3 9	2 4	..	3 9	0
GAMBOGE, pek. d. pipe per cwt.	220 0	..	300 0	270 0	..	310 0		" silver....."	2 2	..	2 5	2 4	..	2 6	0
GUAIACUM.....per lb.	0 8	..	2 6	0 8	..	2 3		PUMICE STONE.....per ton	120 0	..	150 0	120 0	..	150 0	0
KINO.....per cwt.	50 0	..	85 0	50 0	..	85 0		SOAP, Castile.....per cwt.	33 0	..	34 0	35 0	..	36 0	0
rough....."	12 0	..	27 0	0 0	..	0 0		SPONGE, Turk. fin pkd pr lb.	12 0	..	16 0	12 0	..	16 0	0
scraped....."	30 0	..	39 0	0 0	..	0 0		Fair to good....."	4 0	..	11 0	4 0	..	11 0	0
MASTIC, picked.....per lb.	6 0	..	7 0	6 0	..	7 3		Ordinary....."	1 0	..	3 6	1 0	..	3 6	0
MYRRH, gd. & fine per cwt.	120 0	..	240 0	120 0	..	200 0		Bahama....."	0 6	..	3 6	0 6	..	2 6	0
sorts....."	40 0	..	110 0	73 0	..	115 0		TERRA JAPONICA—							
OLIBANUM, p. sorts....."	70 0	..	77 0	73 0	..	78 0		Gambier.....per cwt.	24 6	..	24 9	24 0	..	0 0	0
amber & ylw....."	00 0	..	70 0	68 0	..	73 0		Free cubes....."	34 0	..	37 0	26 0	..	27 0	0
garblings....."	22 0	..	40 0	22 0	..	40 0		Cutch....."	19 6	..	20 6	22 0	..	23 0	0</



Eques.—The following you will find a good recipe for harness blacking. Take of—

Mutton suet 2 oz.
Beeswax 6 oz.

Melt, and add—

Sugar-candy, finely powdered 6 oz.
Soft soap 2 oz.
Lamp black 2½ oz.
Indigo ½ oz.

When thoroughly mixed, add—

Oil of Turpentine ¼ pint.

It should be used by laying a very little on the leather, evenly spreading it over the surface, and then polishing with a brush or soft rubber. It is waterproof.

W. W.—We think the difficulty you find in obtaining a product of one uniform consistence is owing to a variation in the manner of mixing. We should recommend you to add the turpentine in which the beeswax has been previously dissolved, very gradually to the soap solution, and constantly stirring all the time. You might improve the colour by adding a little powdered gamboge, previously rubbed up with a small quantity of the water.

H. F.—You can prepare a Quinine cordial as follows:—Take of oranges (sliced), 3 dozen; rectified spirit, 2 gallons; digest for fourteen days; strain, press, and filter; and in the clear liquor dissolve the requisite quantity of quinine with the aid of a gentle heat: then add of lump sugar 28 lbs. (previously dissolved in 4½ gallons of water); tincture of saffron, 1½ fl. oz.; and orange-flower water, 2 quarts.

D. McR.—We can recommend you the following as a good formula for Tonic Bitters:—

Take of—

Gentian root 2½ lbs.
Dried orange-peel 1½ lbs.
Bruised cardamoms 2½ lbs.
Proof spirit 4 gals.

Macerate fourteen days

And for French Polish—

Pale shellac 5½ oz.
Gum Elemi ¾ oz.
Spirit 1 pint.

Dissolve.

Citricus.—The constitution of the residue obtained by heating citric acid varies greatly with the temperature, etc. The best authorities state that this residue is generally a mixture of two or more of the acids which you failed to detect. It is therefore probable that your analysis is at fault. We cannot do better than refer you to Gmelin's "Chemistry," vol. xi., page 438.

Alpa.—A new process for covering pictures, maps, etc., with a beautiful and protecting coat is to soak gutta-percha in ether till it swells up, and then apply it rapidly with a fine brush. Dirt can always be washed off with a moist sponge.

Cera Flava.—To prepare a wax for floors, heat 5 oz. of pearlsh, 25 oz. of yellow wax, and 20 oz. of water together, stirring frequently until a thick mass results, from which water does not separate on standing a short time. Then add about a pint of boiling water, with constant stirring. It should be applied with a woollen rag, and thoroughly rubbed in.

Agricola.—(1.) Coprolites, according to Buckland, are the petrified dung of carnivorous reptiles. They contain a considerable amount of phosphate of lime—hence their value in manure. After being washed, the nodules are ground to powder in a mill, and mixed with an equal weight of oil of vitriol. (2.) The value of guano depends entirely upon the percentage of uric acid and urate of ammonium present in the sample. The ammonia existing in the guano under the form of carbonate, or other soluble salts, is either soon dissipated in the air or washed away by heavy rains, so that it is the least valuable constituent, and it may be even added artificially, which is almost impossible with the uric acid or urate. The favourite adulteration is a variety of umber, which is brought from Angora in large quantities.

Canis.—The mange is a contagious disease, and like the itch is produced by *acari*. The best treatment is to use plenty of soap and water, with the frequent application of sulphur ointment or solution of chloride of zinc.

Jalap.—The bill introduced to provide for the registration of firms has been withdrawn.

"*Syrupus*" is quite of opinion that a good formula for Syrup. Croci wanted, the American receipt with glycerine is quite a failure; it results only in loss of time and material. Twice he has made it accurately according to the receipt, and although it at first appears everything that could be desired, it soon changes, candies, and loses its colour. It is a pity that these advertised receipts are not thoroughly tried before given to the public, for they only result in want of confidence and disappointment.

Pharmacien.—We are unable to give you any quotation of the market value of British galls, simply for the reason that they are not in the market.

Spes.—We think Paris' "Pharmacologia" is the best work on prescribing, though it is not particularly modern, nor very small. If you can bring yourself to adopt homoeopathy, you will find an abundant choice of handy prescribing manuals, to be had from any of the wholesale homoeopathic chemists. A person going abroad, and determined to prescribe for himself, should take a medicine chest, and with these excellent little manuals are often supplied.

S.N.J.—The usual price paid by the wholesale firms for good-sized poppy-heads averages about 20s. per thousand.

A Subscriber.—There are several methods of preparing Phosphor Paste; the following is the formula authorized by an ordinance of the Prussian Government, dated April 27th, 1843:—

Take of—

Phosphorus 8 parts
Water (lukewarm) 180 parts

Mix in a mortar, and add of rye-meal, 180 parts; when cold, further add of butter or lard, 180 parts, sugar, 125 parts, and mix the whole thoroughly together.

Cantharis.—The best method of preserving the flies is to put them into tin canisters, with a few drops of oil of cloves, or glacial acetic acid. You could only detect adulteration in powdered cantharides by the microscope. Euphorbium and licorice powder are the most likely substitutes.

Mr. C. (W.)—You always send your queries too late. We keep no file of the circular you allude to, and could not possibly trace out the paragraph for you. The Pharmacopœia process is the "easiest" and the only correct method of preparing quinine sulph.

A regular Subscriber.—You will find the following form an inseparable Brilliantine:—

℞ Honey, 5j.
Glycerine,
Eau de Cologne, aa, 3ss.
Spirit of Wine, 5ij.

Ignoramus.—Certainly not; unless there was a stipulation to that effect in the indentures.

D. and Co.—We are much obliged to you for calling our attention to the error; it was a misprint.

E. P. D.—1. Hair Restorer:—

℞ Honey, 5ij.
Beeswax, 5j.
Cochineal (bruised), 3j.
Camphor, 5j., dissolved in Rectified Spirit, 5ij.
Soft water, 5xx.
Oil of rosemary, gtt. xx.

2. All depends upon your idea of "tolerably good." If the establishment was like that of Mr. Boh Sawyer, in which half the drawers would not open, and the other half had nothing in them, you might proceed on a sum even less than you mention. 3. It is purely a matter of taste; we should prefer mahogany.

Exchange Column.—A correspondent suggests that it would confer a favour on advertisers using this column, if intending purchasers correspond before remitting postage stamps, as he states that it cost him almost as much to return those which he received after making his bargain, as it did to advertise.

Hesperides.—1. We should think your best plan would be to let the hair be cut rather short, have it shampooed frequently, and make liberal use of a stiff brush every day. 2. For an elementary work on Midwifery, we should recommend you "Obstetric Aphorisms," by J. J. Swayne, M.D., 3s. 6d.; as for one of a more comprehensive character, "Lectures on Obstetric Operations," by Robert Barnes, M.D. Both published by J. and A. Churchill.

Erratum.—In the formula for Donovan's Solution, given in our NOTES AND QUERIES last month, for Iodine "gr. jss." read gr. lss.

